

SOUTHERN PLANTER

v.35 no.5-6 1874

v.36 no.2, 6-8, 10-11 1875

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THE SOUTHERN PLANTER AND FARMER,

DEVOTED TO

Agriculture, Horticulture and the Mining, Mechanic and Household Arts.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON,

EDITOR AND PROPRIETOR.

T. L. PAYNE,

ASSOCIATE EDITOR AND BUSINESS AGENT.

New Series.

RICHMOND, VA., MAY, 1874.

No. 5.

The general spirit of enquiry and enterprise which is gradually diffusing itself among the farmers of the South, is especially gratifying to the agricultural journalists of this section. Whether this is to be attributed to the popular organization which has spread itself so rapidly among the farmers of the West and South, or to a conviction that the modes of culture hitherto practiced are unprofitable if not ruinous, or to the influence of the agricultural press, which has so earnestly advocated such a change as we now see gradually going on amongst us, or whether it is the effect of all these combined, it is alike gratifying to all who take a patriotic interest in the welfare of their country. In Virginia, along the lines of the railroads, we see many evidences of improvement. In some, indeed, in many instances emigrants from the North and from Europe have purchased farms and put up new buildings and planted orchards and made other improvements apparent even to the most casual observer. But by far the greater part of the land is still held by those to the manor born, and it is among this class that we see so much improvement in the way of culture. Most Northern men especially who come amongst us, bring with them notions and ideas of farming imbibed in the North, where the soil, climate and system of labor are entirely different from that they meet with here. With true Yankee persistency they stick to these ideas, notwithstanding the repeated failure of those who have preceded them, and the result, in nine cases out of ten, is disappointment and disgust, if, indeed, financial embarrassment and even ruin do not follow. The natives, upon the contrary, are well acquainted with the soils they have to cultivate and also the cheapest and easiest mode of improving them, and they know, too, how to manage the negro,

who is the only laborer available, and then, too, they proceed cautiously and generally obtain, without any considerable risk, the object aimed at.

While, then, we welcome those who come among us, and anxiously invite increased immigration, especially of the class who are able to buy our waste lands and improve them; yet, we look mainly to the native population for permanent, paying improvement. The intelligent and enterprising of our farmers are now fully awake, and we are confident from what we have seen in the last twelve months that we are on the way to an agricultural prosperity hitherto unknown even in the most favored days of our *ante-bellum* experience.

But there is one thing in which most even our best farmers are deficient, and in which the Yankees (we do not use the term in an offensive sense) are very far ahead of us, that is *system*. Very few even of our best farmers have a settled system of culture, and fewer still keep accounts and know what their crops cost them in money and labor. This is our great want now. We need it for ourselves, that we may know exactly what we are doing, and we need it for the benefit of those who wish to know what these things cost. Another drawback to progress with us is the general indisposition of our farmers to impart to others the information they have attained through experience. The success or failure of any system if published would serve as a guide to others, and, perhaps, insure success or, at least, frequently avoid disaster. Almost every good farmer has some speciality with which he is particularly successful. If now he would set down and write out his mode of preparation, planting, manuring and cultivating that particular crop and publish it to the world, it would certainly be of benefit to his less successful friends and to the farmers at large. Such contributions impart increased value and interest to agricultural papers and enable the Editor to provide a vast fund of information for his thousands of readers.

THE CENTRAL WATER-LINE.

Though just at this time a national question, the completion of the James River and Kanawha canal to the Ohio is a matter of vital domestic interest to Virginia. We believe that it would do more to advance the interest of the agricultural classes of our State than all other schemes combined. Could the large surplus corn products of the West be cheaply brought to our doors so that we could feed stock enough to enrich our lands, the prairies of Illinois would soon prove a surer, safer and more economical source of manure than the Chincha islands have been. We believe that should the government undertake the construction of this line that its opening will prove the beginning of a new era in Virginia farming. It would certainly work a wonderful change in the present system. Many crops which we now cultivate from necessity, at an actual loss, would be discarded at once and others more valuable substituted for them. Could we buy ten cent Western corn at a fair rate here to enrich the worn wheat-fields of Virginia, the Richmond mills could again supply the South American ports with their favorite brand of flour. So the tobacco

crop, the money crop of Virginia, might be doubled if we could obtain a cheap and sure fertilizer by feeding stock upon our farms.

The farmers of Virginia should, we think, bring all their influence to bear upon the national legislature, to ensure the completion of this great work.

MIXED FARMING.

We feel disposed again to urge upon our farmers the propriety of diversifying their products. The fact that wheat and tobacco have heretofore, and may for the future, continue to be the staple products of Virginia, does not make it unprofitable to cultivate other crops. Our own experience, and that of our friends satisfies us that there is not a sufficient variety of crops cultivated to insure the highest degree of profit.

There are quite a number of other products equally as well adapted to our soil and climate, which might be raised at a profit if our people would only give their attention to it. We need hardly say to our farmers that if their lands were properly prepared, a ton of hay could be as cheaply raised here as at any point in the North, and that there is more clear profit in selling two tons of hay from an acre of land at \$25 a ton than there is in almost any crop we can cultivate when risk, labor and all are calculated. The great mistake with our farmers is that they sow grass on their poor lands and take the best for cultivation. If, upon the contrary, they would seed their best lands to clover and grass and make the poorer parts, which would then be brought into cultivation, rich by the application of manure, they would have a crop of grass over and above what they now make upon their farms, and the land producing that crop would be constantly improving.

To grass we might add many crops not now cultivated to any considerable extent. But most of our people know to what crops their lands are best adapted if they would only give the subject the thought and attention it deserves.

We again urge upon our farmer friends to carefully note every thing of importance in the cultivation of their crops, and let the result of their observations, whether they be successful or not, be known through the columns of the agricultural press. If you have failed, others becoming acquainted with the cause of your failure, may avoid it. If you have been successful, others may follow you to success.

THE CURRENCY

question is one of so much interest to our farmers that we append the following statistics of the currency of four of the leading nations of the world. It was compiled by Mr. Ott, the gentlemanly Secretary of the Southern Fertilizing Co., and kindly furnished by him for publication :—

The currency proper of this country, specie payments being suspended, is only the outstanding legal tender issue of \$381,330,327. The national bank circulation, amounting to \$342,500,000, is only the expansion of bank credits,

bank notes, of course, having the quality of currency, but not that of money which has been to a certain extent legislated into the "legal tender."

The following statement, compiled from data furnished by the Bureau of Statistics, will show how its volume compares with that of some other countries :

THE UNITED KINGDOM, (CLOSE OF 1872.)

Gold coin in the country.....	£84,500,000
Silver coin in the country.....	15,000,000
Bronze coin in the country.....	1,100,000
Bank notes, less coin reserve held against them.....	40,500,000
Total active circulation.....	£141,100,000
Equivalent in dollars.....	\$683,000,000

FRANCE IN 1873.

(Victor Bonnet's Estimate on coin.)

	<i>Francs.</i>
Gold coin.....	4,000,000,000
Silver coin.....	1,500,000,000
Notes of Bank of France, Dec. 26, 1873.....	2,807,000,000
	8,307,000,000
Deduct coin reserve in Bank of France, Dec. 26, 1873.....	759,900,000
Total active circulation.....	7,547,100,000
Equivalent in dollars.....	\$1,509,000,000

GERMAN CONFEDERATION.

	<i>Thalers.</i>
Coin circulation in 1870.....	630,000,000
Coined since 1870.....	335,000,000
Bank note circulation, Jan. 1. 1872.....	320,000,000
	1,285,000,000
Deduct—	
Legal reserve of banks.....	100,000,000
Coin in government military chest.....	40,000,000
Retired silver.....	167,000,000
	307,000,000
Total active circulation.....	978,000,000
Equivalent in dollars.....	\$704,000,000

In this estimate the coin reserve is deducted from the current circulation. Applying the same rule to this country and reducing our paper money to specie we have the following result.—

CIRCULATION OF THE UNITED STATES IN 1873.

Legal tenders.....	\$356,000,000
Fractional currency.....	48,500,000
Bank notes.....	342,500,000
Coin certificates.....	37,500,000
Total.....	\$784,500,000
Deduct—	
Depreciation of \$747,000,000 of currency below par..	\$81,000,000
Specie in banks, as reserve.....	18,000,000
Legal tenders required as bank reserve.....	97,000,000
	196,800,000
Active circulation.....	\$587,700,000

Comparing the active circulation of the respective countries with their population, we have the following result as to the amount of currency per head:—

	<i>Active circulation.</i>	<i>Popula- tion.</i>	<i>Circulation per capita.</i>
Great Britain.....	\$ 683,000,000.....	32,000,000.....	\$21 34
France.....	1,509,000,000.....	36,000,000.....	41 91
Germany.....	704,000,000.....	39,400,000.....	17 87
United States.....	587,700,000.....	41,000,000.....	14 33

Thus placing the circulation of the several countries on a gold basis, which is necessary to a true comparison, we find that the amount in this country is \$14.33 per head; in Germany, \$17.87; in Great Britain, \$21.34, and in France, \$41.91. Taking population into account, our circulation is about one-third that of France, two-thirds that of the United Kingdom, and four-fifths that of Germany.

In this connection it will be interesting to look at the matter of gold and silver in this country. The following table (U. S. Bureau of Statistics) will exhibit its movement from 1861 to 1873, inclusive:—

	<i>Exports.</i>	<i>Imports.</i>	<i>Re-exports.</i>
1861.....	\$ 23,799,870	\$46,339,611	\$ 5,991,210
1862.....	31,044,651	16,415,052	5,842,989
1863.....	55,993,562	9,584,105	8,163,049
1864.....	100,473,562	13,115,612	4,922,979
1865.....	64,618,124	9,810,072	3,025,102
1866.....	82,643,374	10,700,092	3,400,697
1867.....	54,976,196	22,070,475	5,892,176
1868.....	83,745,975	14,188,368	10,038,127
1869.....	42,915,966	19,807,876	14,222,414
1870.....	43,883,802	26,419, 79	14,271,864
1871.....	84,403,359	21,270,024	14,038,629
1872.....	72,798,240	13,743,689	7,079,294
1873.....	73,905,546	21,480,937	10,703,028
Total.....	<u>\$815,202,227</u>	<u>\$244,945,092</u>	<u>\$107,591,558</u>

Total exports.....	\$815,202,227
Add re-exports.....	107,591,558

Gross total sent out of the country.....	922,793,785
Deduct total brought in.....	244,945,092

And we have actually parted with in the space of thirteen years. \$677,848,693

As long as our purchases abroad are as much in excess of the value of the products we give in exchange, as to necessitate the shipment, to pay for this excess, of the amount in hard money, as shown above, or an average of \$52,-142,207 per annum, the prospect of an early resumption of specie payments in this country can hardly be expected. The present annual product of gold and silver, in the United States and Territories, is about \$62,000,000. (Report U. S. Treasury Dep't.) We know that the consumption for jewelry and plate is large. This, added to the annual export, as above, will exhibit how impossible it is for the precious metals to accumulate rapidly in this country; and until this takes place, our paper money must continue without a hard basis. It will be observed that the banks, all told, hold but \$18,000,000 coin.

We add a comparative statement showing the volume of bank circulation, and the amount per head, in the several sections of this country, in 1862 and 1873. It will exhibit the great disadvantage, in the general race for prosperity, under which the South labors, as compared with the North and West:—

	<i>Bank Circulation.</i>		<i>Circulation per capita.</i>	
	1862.	1873.	1862.	1873.
Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut.....	65,516,155	110,489,966	20.90	31.68
New York, New Jersey, Pennsylvania, Delaware and Maryland....	82,372,091	124,601,398	9.97	12.82
District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Kentucky, Tennessee and Missouri.....	71,098,408	38,160,308	6.17	2.91
Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, Minnesota, Kansas, Nebraska.....	19,684,564	78,785,148	2.49	7.09
Nevada, Oregon and the Territories, —California never having had any paper circulation, does not come into the account.....		1,924,688	....	1.82
<i>Note.</i> —Virginia.....	19,817,148	3,902,342	12.41	3.18
West Virginia.....		2,360,307	.....	5.34
North Carolina.....	5,218,598	1,819,300	5.26	1.70

NOTES FOR THE MONTH.

With the opening of the month the labors of planting press more urgently than ever upon the cultivator of the soil. Nature is clothing herself rapidly in her beautiful habiliments of green, and vegetable life everywhere assuming such a vigorous form, that we are warned if we wish to make a crop the seed must soon be deposited in the warm and genial soil.

CORN.

The seeding of oats and grass should have been completed some weeks since in the latitude of Richmond, and a good part of the corn crop already in the ground by the first of this month. But it is still time to plant corn, and we believe that could all our planting be done in one day, we would as soon plant on the first day of May as any in the year. Twenty years experience has satisfied us that there is nothing gained by putting seed corn in cold ground, provided it can be put in immediately after the ground gets warm. Our preference would be to plow our land four inches deep, at least three weeks before planting; let it have a good heavy rain to settle it thoroughly; then harrow finely, and cross-plow eight inches deep and leave it until ready for planting; then harrow finely and plant immediately. Thus giving the land two good workings before planting. In this way many troublesome weeds will be gotten rid of, and the soil will be so mellow that the young rootlets will easily penetrate it in every direction in search of food. The soil best adapted to the growth of corn is a deep, sandy loam, such as we find in alluvial deposits along our rivers and creeks. But every one cannot have this kind of soil, and we must substitute the best we can by making such as we have as deep, loose

and rich as possible. It is the height of folly to attempt to make a crop of corn upon shallow, poor and ill prepared soil. The manures best suited to the production of corn are such as are rich in ammonia, phosphate and potash. Stable manure, when obtainable, will generally give the best and most satisfactory results, but where this cannot be obtained, some good fertilizer combining the above ingredients should be applied, unless the land is rich enough to produce a good crop without any aid. Soon as possible, after the corn is up, the harrow should pass over it, and the same process again repeated in a week or ten days. The surface will thus be kept fine and mellow, and weeds and grass destroyed. Corn may be safely harrowed until ten or twelve inches high; after that, we prefer to use the cultivator, or coulter, though many of the best farmers still claim the old-fashion of hilling up the corn with a mouldboard plow is the best. We will not discuss the matter here, but simply say that whatever instrument is used, the surface should be kept clean and mellow until the corn begins to shoot and tassel.

TOBACCO.

We presume, of course, that every one who expects to raise tobacco has made provisions for a supply of plants; if he has not, it is now too late to supply the deficiency. Presuming therefore, that the plants are at hand, the ground should now be thoroughly plowed and harrowed until perfectly fine. If stable manure is to be used, it should be applied broad cast and well-raked in. In the absence of stable manure, some well-tested fertilizer should be applied at the rate of from two hundred to five hundred pounds per acre. If only a small quantity is used it is best to put it in the hill, but if a large quantity, then let it be sown broadcast and well-harrowed in. The land should then be thrown in beds, $3\frac{1}{2}$ feet apart, and as soon as all danger of severe frost is past and the plants are large enough, generally about the 10th of May commence planting on the ridges $3\frac{1}{2}$ feet apart. In the cultivation of tobacco, the great object is to keep the surface loose and free from weeds. This can only be accomplished by the diligent use of the plow and hoe. We refer to several articles on the subject of tobacco in this number of the *PLANTER*.

MILLET.

This is a good time to sow millet for hay. The land should be nicely prepared, made rich and half bushel of seed sown to the acre.

SWEET POTATOES

Should be planted out as soon as possible now as well as all other tender garden and marketing crops, such as tomatoes, cucumbers, melons, squashes, beans, cornfield peas, &c.

WE CALL attention to the very favorable terms on which we are offering the *PLANTER AND FARMER* to clubs, and urge upon our friends that they go to work at once and get up clubs. If each one who is now a subscriber would induce his neighbor to subscribe also, we would soon run our circulation up to 10,000. We want to make the *PLANTER AND FARMER* the farmers' vademecum, and can do so if our farmers will only write out their experience and send it to us. We wish to have a correspondent in every neighborhood in the State.

Agricultural Department.

[For the Southern Planter and Farmer

MONASKON FARMERS' CLUB.

Met at the residence of Mr. James H. Chowning, Thursday the 5th of February.

President A. L. Carter occupied the chair.

Subject of *Sheep Husbandry* was introduced by Mr. Jas. H. Chowning, who said:—Mr. President and Gentlemen of the Club, I think the subject before the Club to-day does not receive the attention among the farmers generally that it should. There is a handsome profit to be realized from sheep raising with judicious treatment. Nor do I know of any business affording so much pleasure as that of Sheep Husbandry; but while it is pleasant, it is true that comparatively but few farmers understand as they should. I have been somewhat of a shepherd from my boyhood, and could easily tell all of my father's sheep by name, (for I had a name for each.)

I will give you the benefit of my experience, although it may not be worth much. I think the best breed for us is the Cotswold, both for mutton and wool; they fatten easily and produce more fleece than any other of my acquaintance. I have often clipped nine pounds of wool from my ewes, raising at the same time one or two lambs, which will do pretty well for this section of country. I have no doubt that with good pasturage and proper treatment as much as twelve pounds could be gotten. The Leicester, in my opinion, will not do; they are too delicate; their wool is too short to make it profitable. With the Merino I have no experience; from what I have seen and read, I like a cross between the Cotswold and Southdown. Every farmer ought to be able to tell the age of sheep. A lamb has a full set of small teeth in the lower jaw, and any one unacquainted with sheep might pronounce a lamb an old sheep. At one year old a lamb sheds two front teeth and two more comes in their place, and two is shed every year until his mouth is completed, and the teeth are large, white and sharp. They then gradually wear away, and when the sheep is six or seven years old, should be turned into mutton.

The diseases of sheep are numerous and difficult to cure. They rarely ever recover from the second attack of the same disease. Many remedies have been prescribed. The best course perhaps is to be governed by circumstances, as no one remedy will answer for all cases. Foot rot, tail rot, and maggots and rotting poisonous scabs are more generally the complaints we have to deal with. Sheep require frequent change of pasture and salting once or twice a week, unless they have access to salt water, and in winter when pasturage is lean should be fed on turnips and small grain. I have tried sheltering at night, but have abandoned it, except in stormy weather. As to the time of lambing, I once was of the opinion that lambs should be dropped late. Recently I have had cause to change my mind. In the first place, lambs that come early are sooner ready for market and command a higher price. 2d. Ewes are in better condition and not so weakly at the time of lambing. 3d. Our winters are more favorable than spring, when stock of all kinds seem to suffer most. The greatest drawback

perhaps attending the raising of sheep are the mean and worthless dogs that are allowed to run at large and often take to sheep-killing. I have not the statistics before me, but I am sure there are more dogs than sheep in this State. I cannot see why a tax is not imposed upon dogs. I am told they are not property and it would be unconstitutional to tax them. If dogs are not property, why are so many worthless curs allowed to run at large? I contend, sir, that dogs are property and should be subject to tax as well as other property, and would vote a heavy tax be put upon them and rid the State of thousands of useless curs. I hope the present Legislature may take the matter in hand. Then, and not till then, may we hope to do something in sheep raising.

Mr. J. C. Towles said the subject for contemplation before the Club to-day, is one of great interest to every Virginia farmer. I find my sheep for the past year, ending July, 1873, has paid me over fifty per cent., clear of all expense. From the experience I have had in sheep husbandry, I have come to the following conclusion:—1st. They make the quickest returns for the investment in them, being ready to eat at three or four months old and yielding a valuable fleece of wool at one year old and perhaps a lamb also.

2d. Their subsistence is cheaper than that of any other domestic animal, and they supply the family at all seasons of the year with a most wholesome and delicious meat.

3d. An investment in them is self-sustaining and grows rapidly by their annual increase.

4th. They have but one enemy, and that the dog. Our Legislature does not comprehend the subject. It allows the dog to run at large, unrestrained by law, and thereby this inestimable value is almost entirely lost to the State. I do assert, that it is a disgrace to any State to protect its curs so well that they expell to a certain extent the only animal which can cheapen the meat and clothing of her people.

Mr. J. C. Euell:—There has been some contention as to whether dogs are property or not. It would be better to tax the dog as a nuisance, than to tax them as property; because the most useless curs would only produce a few cents tax, while if they were taxed as a nuisance, they might be made to yield any amount of tax the Legislature might see fit to impose upon them, and also be very beneficial to sheep raisers in getting rid of the number of dogs.

Mr. A. L. Carter:—In 1869 I had two flocks of sheep, one at each of my farms. In 1871 I sold one of my flocks; the other has gradually increased. Last year my sheep averaged $6\frac{3}{4}$ lbs. of wool in shearing in general. I cut the coarse and dirty wool off and kept it to itself, not allowing it to become mixed with the better quality of wool, as it will injure the sale of it. From 1869 to the present time my lambs have increased 25 per cent. each year. The lambs and wool have paid the value of the old sheep.

Mr. W. T. Sneed:—Much has been said by the Club about sheep, but no one as yet has said anything about wintering them. My experience teaches me for the past few years there is great economy in housing sheep in winter. Then you can attend to the lambs when they drop. Before housing my sheep, I frequently lost lambs during stormy weather, many of them perishing in the cold, but since I have kept them housed bad weather and nights, I have not lost one. No

animal delights more in a good, dry warm bed. And I am sure it will pay. As there are so many worthless curs running about at large, it will be a protection to herd them with the cattle, as this will keep the dogs off.

The following resolutions were unanimously adopted by the Club:

Whereas, the raising of sheep has been ascertained by practical experience to be the most profitable source of revenue to the farmers of this section of country, and whereas, there is but one serious impediment to the increase of profits therefrom and its more general extension viz.: the depredations thereupon by worthless dogs, therefore, be it

Resolved, By this Club, that the Legislature of this State be and is hereby petitioned to impose a tax of not less than one dollar per head on dogs, and to enact such laws as in their wisdom would best protect their interest in sheep husbandry.

Vice-President, Jno. A. Rogers, offered the following resolution:—
Viz.: that we invite the farmers of the State, all the Agricultural Clubs and the Press of the State, to unite with us in this petition.

Subject for discussion at the next meeting: "Immigration."

Club then adjourned to meet the 1st Thursday in March, at the residence of J. C. Towles.

J. C. TOWLES, Cor. Secretary.

[For the Southern Planter and Farmer.]

FARMERS' CLUB OF KING GEORGE.

The 17th meeting of the Farmers' Club of King George was held at Farley Vale, January 26th, 1874.

There was a full attendance of members, and Mr. Mortimer Rogers, of Baltimore, was a visitor.

The annexed report on "Cedar Grove" was presented and ordered to be inserted in the minutes and printed.

Mr. Fielding Lewis reported that he had lost recently twenty-one sheep, killed by dogs in four nights. He killed the curs.

Mr. Smith has lost in the same way fifteen or sixteen lambs. Mr. Wm. R. Taylor lost two lambs and others were maimed.

It was resolved, that the farming interest of Virginia demands the protection of sheep from the depredation of dogs, and that our Senator and Delegate be requested to endeavor to obtain legislation to guard this great interest of the State.

Resolved, That this Club co-operates cheerfully with the Monaskon Club, of Lancaster county, and requests our Senator and Delegate to exert themselves to obtain such legislation as to require owners to restrain their stock from depredating upon the lands of others.

The "Cultivation of Potatoes" being the subject, several members expressed their opinions.

Mr. Cawood thinks the white Peachblow the best potato. It proved far superior to the Peerless.

Mr. Dickinson's white Peachblow was hollow in the heart. It was agreed that all large potatoes are liable to be hollow.

Dr. Ashton said, that his crop had proven one-third larger by run-

ning the shovel plow after the earth had been thrown to the hill by mold-board plow. He planted very deep.

Mr. Dickinson would guard against the use of unfermented manure.

Mr. H. B. Lewis said, that the smallest quantity of salt destroyed the vitality of the seed. It ought never to be put in a bag which has had salt in it.

The President read a long and interesting extract from Compton's "Prize Essays on the Cultivation of the Potato."

The subject for consideration at the next meeting is, "What means of co-operation among farmers shall best promote their interests."

EDW. T. TAYLOR, Secretary.

The plantation of Farley Vale is under the skillful management of Major J. D. Rogers. It has improved very much. The wheat looks very promising and a dressing of plaster will ensure fine clover upon the last year's wheat-field. The Major is nearly ready to plant corn.

Our wheat crops are very promising. Many peach buds were killed by recent freezes. It is hoped that those in bloom not open will escape.

The committee appointed to inspect the Cedar Grove plantation, report that they regard it unnecessary to enter into details, as a comprehensive report was made to the Club a twelve months ago. It was evident that this fine plantation is in an improving state, recovering rapidly from its neglect during the war.

The wheat crop was the best seen by any of the Club. It excited the surprise and admiration of all. Sown with the drill, and one hundred pounds per acre of four kinds of fertilizers applied to different portions of the field. The crop seemed equally good in all its parts. It is rare to see any so uniform as this was. The Fultz wheat was the variety sown. The winter has been very favorable for its growth, and if no disaster befall it, there is every prospect of a heavy yield of wheat.

Dr. Stuart had made good progress in plowing for the corn crop. In this respect our farmers have generally been active, availing themselves diligently of the mild and open winter,—one unusually favorable for farm work.

We had the most satisfactory evidence of the excellence of the Doctor's flock of sheep, in the saddle of mutton exhibited on his table. It was taken from the flock,—not stall-fed—and in size, fatness and flavor, it could not, in the opinion of your committee, be surpassed by any from the Piedmont section of Virginia. Sheep are a profitable stock in King George county, and if the numerous vile curs which prey on so many flocks and deter farmers from raising sheep in larger numbers, could be exterminated, or *not allowed to go at large*, they would be a source of large emolument, increasing the comfort and purses of the people. If our legislators would do their duty, they might, by legislation, increase largely the number of sheep in our State, enrich our lands, eradicate the weeds and briers, and, at the same time, contribute to the educational fund and extend the usefulness of our schools.

Upon this plantation, we were shown the inutility of efforts to drain the pocosens which abound in tide-water, Virginia. Doctor Stuart pointed to an extensive marsh, which his father had drained at great

expense. In the earliest volumes of the *American Farmer*, Mr. Stuart gives in detail his successful effort at draining this land—or rather, this water. The result was, that he made one fine crop of corn and raised some coarse, heavy tobacco on a part of this reclaimed marsh. In a year or so, the soil settled so low that the banished waters returned, and have never again been exiled. Such has been the fate of like attempts on the James and Rappahannock rivers.

To illustrate the energy and practical skill of even our elderly farmers at this day, we are bound to notice an excellent gate, made of thin plank and riveted with bolts and screws, the work of the Doctor's own hands. We commend it as an example to others, who oblige us in passing through their farms, to alight to open a pole gate, dragging on the ground, and perhaps sustained by one inferior hinge. This may fit some of our Club, whom we advise to mend their ways and gates, or, at least, remove the nuisance.

Respectfully submitted,

EDW. T. TAYLOE, Chairman,
WM. TAYLOR SMITH,
JNO. P. ROBB.

[For the Southern Planter and Farmer.]

BEST USE FOR STRAW—CULTIVATION OF HAY, &c.

Mr. Editor,

All observant, intelligent farmers admit the benefit derived from the use of straw or other roughness, as a covering or protection to any growing crop. If converted into manure in the stable or barn-yard, it covers but a small space, compared with what it would do if used direct from the stack. Then the labor to haul the wheat to the barn and the manure back, half of it water, and to a remote part of the farm, is no small expenditure of time and capital. To thrash the crop near where the straw ought to be used, and to apply it to the land as soon as convenient after seeding, is the plan adopted for several years by Col. D. S. Bell of this county, one of our best farmers. His farm is a dark slate, rolling, and some of it steep. The improvement in eighteen years, since he bought it, is very great. Besides large crops of corn and wheat, he has for a number of years made hay a specialty. Last year he sold 150 tons of baled hay, and fed to sheep he fattened, and to his other stock, perhaps, 75 to 100 tons. He made 112 bus. of nice clover seed. Except his work horses and oxen and a few milch cows, he keeps no other stock. His wheat and grass fields are top-dressed with straw, as far as it will go, and on the thinnest and northern exposures. After mowing no stock runs on the land to eat off the *aftermath*, as the English call the second crop. His average yield of hay I have no doubt will reach three tons per acre. He sold it at 75 cts per hundred at home, an average of \$45 per acre. His wheat and corn crops are equal to any of his neighbors. On the 4th Mouday in May last, riding through his farm, he called my attention to a piece of clover at a quarter of a mile in distance, and asked me if I observed anything peculiar about it. I remarked it had a dark luxuriant appearance as though it would fall down. He said "it was

one of the thinnest spots in the field, and last fall he had straw spread thickly over it. In March a year ago, we had an intensely cold spell, the mercury falling below 0. In a few days the ground thawed six to eight inches in depth, followed by a heavy rain with wind, thunder and lightning. The ground being loose, the rain penetrated to the depth of the thaw, and not sinking deeper, ran off carrying the soil, and in wheat fields particularly, made gullies where the ground was steep, to the depth of six to eight inches. I had several acres in this condition. As soon as the ground was dry enough, I had the washed places covered plentifully with straw. Little wheat could be seen. On the 10th of April I sowed clover and timothy seed, one-third of the latter to two-thirds of clover. At harvest the most luxuriant wheat in the field was on the part spread with straw, and after harvest a neighbor begged me to permit him to cut the grass for hay."

I was not aware until lately that a friend and acquaintance on James River is a worthy competitor of Col. Bells in the cultivation of hay. Some weeks ago I met with a communication, I think in the *Whig*, giving the figures, and regret I can't produce it to render to this gentleman the credit due to him in so praiseworthy a success as he has achieved in raising hay. I have reference to Col. Henry Gantt near Scottsville. Never having seen his farm, I can only describe it as consisting in part of James River low-grounds, and the table and rolling uplands adjoining.

Many of your readers have not forgotten the late Richard Sampson, who made his impress on the Agriculture of Virginia, as scarcely any one man has been able to do in one generation. So successful was he that he demonstrated it as beyond contradiction, that every bale of hay brought to Richmond, from any point north of the Potomac, ought to cause a blush to suffuse the cheek of the James River, or Appomattox, or Staunton River farmer. Col. Gantt has proved himself to be a worthy pupil of the venerable Sampson. He is not only making the culture of grass highly remunerative, but is rapidly adding to the fertility of his land. I have had no communication with him on the subject, but know that in the past he was successful in tobacco culture, yet I venture the assertion if he was to give his experience, he would say that hay is more remunerative. Tobacco is not only the most troublesome and expensive crop to raise, and besides being exhaustive, the farmer waits nearly eighteen months before he can realize the proceeds of the crop. In the cultivation of hay, he can often put it in market in from six to nine months. It is due to the farmers of Virginia, that these gentlemen, who are in this regard representative men, should give them, through the medium of your journal, their experience and the mode of cultivation in detail, each, perhaps being best adapted to the part of the State in which he lives. If greater profits can be realized at less cost than in raising tobacco and wheat and the lands at the same time increasing in fertility, many will be disposed to adopt it.

See for a moment the immense advantage Col Gantt has over Col. Bell in the question of transportation, not only in sending his hay to market, but in carrying back from your city ashes, street-sweepings, oyster shells and much else in the shape of fertilizers, at a tithe of the cost that the Chesapeake and Ohio and most of the railroads in Virginia charge on hay. It amounts almost to prohibition to the farmer 50 to

100 miles in the interior when he seeks a market for hay. 'Tis one of the most difficult things to compress—and the railroads charge by bulk. The farmer near the canal can find his own boat, something in the shape of a flat, on which large quantities of hay in bales can be piled, covered with a tarpaulin, and carried safely to market cheaper than the Maine and New York farmers can put it into Richmond. The farmer in the interior, if induced to build his own car, must make it a *box*; a flat will expose the hay to sparks from the engine. So apart from the relative cheapness of water over rail, the boat can be built and run cheaper and safer than the car. It can be demonstrated beyond the possibility of a contradiction, that the lands on the Rapahannock, York, James, Appomattox and Staunton, can grow hay more profitably than any other crop, and find a market in Richmond, Norfolk and Baltimore, at prices fully as remunerative as the corn, wheat or tobacco now grown on the same lands, and with this marked difference in its favor of a constant improvement in the land. Water transportation can be availed of to put most of it in market. Permit this suggestion. The Grange is spreading rapidly through Virginia, and is constituted of the most intelligent and public-spirited class of our farmers.—always of those at least who make up the farmers clubs. May we not hope that all questions of the relative advantages of crops, mode of cultivation, the most economical plan of putting them in market, &c., &c., will constitute subjects of discussion in them, and greater benefit be derived by the many than now by the comparatively few who make up the clubs?

Respectfully,

J. M. McCUE.

[For the Southern Planter and Farmer.]

PROTECTIVE LEGISLATION AGAINST FRAUDS IN FERTILIZERS.

Once more I must crave the indulgence of the Editor and readers of the *PLANTER AND FARMER*, for a few more last words on this important subject; which I had thought finally to dismiss with the brief and general remarks, by which I sought to show, in your February number, the existence of a grave abuse, and the necessity of some legal remedy.

I would have it understood that I don't believe in writing, as Dr. Johnson used to say "he talked for victory,"—certainly not in an agricultural journal, which should find no place for *fruitless* controversy. Nothing but the hope of some good result could tempt me to cope with such odds; and I am sure the Editor is animated by the same spirit, and widely as he differs with me as to the question at issue, agrees in desiring the fullest discussion of all important topics. For the present, there is no hope of securing that end, to which, in the interest of all Virginia, my efforts have been sincerely, though feebly directed. The movement has received its quietus, for the present, at the hands of the accredited organs of the farmers themselves:—"slain in the house of its friends." But, whatever of immediate interest the subject may have lost, is but adjourned to the next ses-

sion of the Legislature. By that time the conservative public opinion of our people (the safe guard of the Commonwealth) will have taken the one step needed in advance. Indeed, I am pretty confident it has already done so, while "the leaders," as usual, are bringing up the rear. One word more, and that by way of apology, as to the importance of the subject.

The utilization of the waste and garbage of towns as fertilizers, is the opening of a mine richer in real wealth than all the treasure of California. It means two blades of grass where one grew before, golden harvests from barren fields, deep-laden ships, crowded marts,—in a word, new life infused into every interest of our sorely-burthened community. Indeed it is the nearest conceivable realization of the creation of something out of nothing.

Such will be the result of the success of this grand experiment. So far, however, let us bear in mind it is but an experiment, depending for success on patient, vigilant, judicious labor. Much remains to be learned as to the preparation, yet more as to the application of fertilizers. The great question is, can we make it certainly pay? The slenderest margin of profit or loss can alone, and must determine, whether this great discovery shall bring us prosperity or ruin.

The cost to the producer, the value to the consumer, are to be determined and adjusted. The latter condition, alone of the great problem belongs to the farmer. The agricultural value of fertilizers is to be determined—obviously by experiment; by a long series of experiments.

So far, the friends and opponents of protective legislation move on harmoniously together. But, at the very next step, their paths diverge. The Editor, the committee of the Farmers' Council, and perhaps many others, are content to make the brand of the packages the basis of their experiments on fertilizers; others placing no reliance in a name which rarely has any pretensions to significance prefer to trust to a statement of the active constituents, made by the manufacturer, and verified by chemical analysis.

As to the trust-worthiness of analysis, I can form no original opinion. I respect that of the Editor; but, it is not supported by the eminent authority he adduces. The sum of Dr. Voeleker's testimony (please refer to it) is simply, that calculations based on a comparison of analysis with valuation tables frequently convey wrong impressions. But the Committee of the Farmers' Council and the Editor, interpret Dr. Voeleker's testimony to mean that the value of a manure cannot be inferred with certainty from a knowledge of its constituents. But this clearly implies that the constituents may be known by analysis. The system of valuation fails to stand the test of experiment. But experiment could afford no test, were the analysis worthless or defective.

The Editor proceeds to infer from Dr. Voeleker's testimony ruinous results to all concerned, from the impossibility of compliance, on the part of manufacturers, with a law requiring them to maintain, in their preparations, a uniform standard of quality or value.

Dr. Voeleker expressly declares the reverse. It is, comparatively speaking, easy to prepare a manure, say at £6 a ton, the calculated value of which amounts to the same sum."

This seems to me, a strange oversight on the part of the Editor;

vet. concurring with him, as to the supreme value of experience, it appears to me still more surprising, that he should have overlooked the fact, that the law of which he makes such a bugbear to Virginia, with great benefits to the consumer, has never caused the slightest inconvenience to the honest manufacturer in any country or State in which it exists. Let the reader take Connecticut for example, and investigate its manufacture of fertilizers.

It is unjust to the farmers to call them "willing victims of irresponsible agents." The farmers are exceedingly shy of the cheap humbugs described, and when they buy them, buy of that class of high-minded, reliable men whom the Editor recommends. The Rosunda for Redonda guano, the greatest sell ever put upon this community, emanated from some of the first houses in Richmond. They, too, probably were deceived. If so, let them now make common cause with the farmers in the prevention of such occurrences in future.

"High character" and "unimpeachable honesty," will not serve instead of law. They are the mask of all the villainy in this evil world. "Laws are intended not to trust to what men will do, but to guard against what they may do."

The Editor refers the farmers for relief, to experience, to competition, and to the future work of the Granges. The two former have been sufficiently tried, and we feel the result in the existing state of things.

If the Granges, as the agents of the "farmers in this collective capacity," should do anything to "detect and punish" frauds of this kind, they must do it through the "legitimate channels of legislation," for it is thus, the Editor assures us, they accomplish their laudible ends. Should they depart from this mode of procedure and attempt to supersede the regular operation of the laws, the remedy might lead to disorders worst than the disease.

The farmers have in the Legislature and Executive Power of the State a more effective agency than any voluntary organization, and if they do not obtain from it all that they ought to have the fault is their own.

The Editor again alludes to this subject in complimenting, very justly, the experiment of Mr. Hobson. But I cannot agree with him in thinking that the publication of such experiments will supersede the necessity of legislation. In the circulars of various dealers in fertilizers hundreds of experiments are laid before the agricultural public, just as authentic and just as conclusive, as to the superiority of certain manures, as the experiment of Mr. Hobson. His differs only in being unusually exact, and all this mass of information has served only to perplex and mislead.

Four years ago I could have reported an experiment attesting the superiority of Pacific to Peruvian Guano as a wheat manure, but for the fact that a small quantity of genuine Peruvian, saved from the Spring purchase and applied near the others, showed the worthlessness of the other Peruvian and the great inferiority (as one to five) of the Pacific.

The phosphate applied by Mr. Hobson may have been exceptionally a good article sent out to advertise a worthless one. Such things are done. Above all, after testing the value of the phosphate for one season, no one can foresee what it will be the next. • It is idle to talk

of the character of the proprietors. They would do a poor business were their sales limited to personal acquaintances, and the most extended experience of the quality of their manures would afford no guarantee for the future.

The reputation of Rhodes' Super-phosphate was well earned, and enabled the proprietor to realize a fortune by degrading the standard.

Your "Reviewer," who seems to have become, like myself, a fixture of the establishment, demands "Why does not the writer tell us what fertilizers to use, or give us some of the details of a law to be passed?" &c. Should I advise my sick friend—sinking fast—to call in the doctor forthwith, what would be thought of him if he insisted that *I* should prescribe for him before he would act on my advice? I see and feel the soil; I believe it is not without a remedy; but should I presume to dictate to the "assembled wisdom of Virginia?" This law-making is a business which calls for much varied information and some little experience.

Laws cannot be run up by plain and square like masonry; if you would have them live they must grow by gradual accretions of strength, striking deep root ere it spreads abroad its protecting branches, and yielding fruit at last only as the recompense of patient, judicious culture, and in the beginning some humble husbandman must prepare the soil. Above all, it must be borne in mind that no law can be thoroughly effective without the sanction of public opinion. For such reasons too much should not be attempted at first. To fix by law the price of *anything*, even money, is arbitrary and unwise. Nor is there any necessity for a legal standard of value in fertilizers. But the adulteration of fertilizers with worthless materials is a fit subject of legislation, and there can be no doubt that, if carried to any extent, it can be detected by analysis. But the great object should be to secure uniformity of quality in every package of fertilizers under the same brands, and that year after year, so long as the brand shall be maintained. By such means, and by no other, can both farmers and manufacturers learn, through experience, how to make, buy and apply artificial fertilizers.

An experiment made with unknown materials is an experiment only in name. There should be no restriction on the manufacturer as to price or quality, but the latter should be maintained unchanged. A sample of every manure offered for sale in the State should be submitted by its proprietor to the State Chemists for analysis, the analysis to be published and to be attached to each package. Then, from time to time, the chemist should make and publish other analyses of samples of the same fertilizers, taken from different sources, in a manner prescribed by law; and, as to the authority of analysis again, would it not be easy to make out as strong a case against experiment? Take the most familiar experiment—say one in planting potatoes or plowing, and see how very often the results are contradictory; yet we don't discredit experiment. If it be true that the same manures, not in name only, but in fact, submitted by the same chemist to the same tests, affords essentially different results at different times, there is an end of this plan at once. But such is not the general testimony of chemists.

The PLANTER AND FARMER has published a good deal of testimony to the salutary operation of such laws as I have indicated above,

based on the reliability of analysis, some of which I procured myself. I see no reason why we cannot do in Virginia what has been done in England, Germany, and Connecticut; nor do I see why this most conclusive evidence of the practicability of legislative protection should be ignored by its opponents. Such a law, so far from injuring the manufacturers, would make an experiment like that reported by Mr. Hobson so conclusive as to be the means of selling hundreds of tons.

I am startled when I look back at the length of this paper, but can abridge it only by omitting the introduction which contains my apology for attempting to write at all.

T. P. L.

[For the Southern Planter and Farmer.]

ON THE PROPER METHOD OF PRESENTING PHOSPHATIC MATERIALS TO THE SOIL.

In the *Rural New Yorker* there appeared, some months since, an article of which the following contains the substance:

"As a modification of the opinion which has generally prevailed, that phosphatic materials, such as bones, guano, rock phosphates and apatite, requires to be treated with sulphuric acid, to be dissolved, as the term is, or made into super-phosphate before they are quite available as fertilizers, the view is now taken by some experts that the soluble phosphoric acid of a superphosphate, as soon as it is applied to the soil, is taken up by the lime, alumina, magnesia or iron, which is found therein; and that neutral salts are formed, so that there is found only phosphate of lime, alumina or magnesia, the only difference from its condition before the action of the dissolving agent being the finely divided state of its particles. It follows that this condition, if produced in any other way and at less expense, is a desirable object." The writer then goes on to say that this may be accomplished by grinding, but that as yet no mill has been found that would reduce to extreme fineness over six or seven tons per day.

Now, if any cheap mechanical contrivance could be made to perform a work as effective as sulphuric acid, in making insoluble phosphatic materials readily available for plant food, it would result in great gain to the farming community. The matter, being backed by respectable names, was deemed worthy of inquiry; and it was accordingly brought to the attention of, perhaps, the greatest agricultural authority in the world, (now that Baron Liebig is died) DR. VOELCKER, chemist of the Royal Agricultural Society of England. It was believed that, with his exhaustive knowledge in this behalf, he could give a decisive answer. The following communication from him to the Southern Fertilizing Company, of this city, contains this answer. It is certainly very clear:

ANALYTICAL LABORATORY,
11 SALISBURY SQUARE,
LONDON, DEC. 1, 1873.

Mr. JOHN OTT, Secretary, &c.

Dear Sir:—It is quite true that the soluble phosphoric acid of a super-phosphate, as soon as it is applied to the soil, is precipitated and rendered insoluble by the lime, magnesia, oxide of iron

and other basic soil constituents, and I go a step further, and maintain that unless the soil, to which a super-phosphate is applied, contains naturally sufficient proportions of basic constituents, in order to precipitate and neutralize rapidly the acid soluble phosphate of a super-phosphate, the super-phosphate may do more harm than good on such soils.

I have repeatedly found that on peaty soils, abounding in humic and similar organic acids, and showing an acid reaction when tested with blue litmus paper, and also on poor, purely sandy soils, the worst super-phosphates, that is to say, super-phosphate poor in soluble phosphoric acid, have a decidedly better effect upon the crops to which they are applied, than super-phosphate rich in soluble phosphoric acid. The latter, under these circumstances, indeed, sometimes do positive mischief.

For all that, the business of treating raw phosphatic mineral materials with acid will not be revolutionized in a hurry; quite the contrary, it will grow as steadily in your country, and become more extensive from year to year, as it has in England and other countries of Europe.

It does by no means follow that, because on some soils, a phosphatic marl, or what amounts to the same thing, finely ground phosphatic minerals, applied to the land in large quantities, is a more desirable dressing than a few hundred weights of a rich super-phosphate, it is a bad plan to treat mineral phosphates with acid. Nor does it follow, from the fact that soluble phosphoric acid must again be rendered insoluble in the soil before it can benefit vegetation, that it is more advisable, as a rule, to use mineral phosphates in a finely ground state than to use them in the shape of super-phosphate.

However fine a mineral phosphate may be ground, it can never be obtained in anything like the state of minute division in which the phosphate is deposited in the soil, if it is applied to the land in the shape of superphosphate. It is the deposition in a *chemically divided* or *precipitated* state, in the soil itself, which constitutes the value, and I believe the true economy, of treating mineral phosphates by acid. By this means one hundred weight of phosphate of lime is made to do the work of at least ten times the quantity of phosphate merely ground into a fine powder.

The soil may be compared with cloth that has been prepared with a mordant, for the purpose of fixing throughout its substance the coloring matter which is applied to it in a state of solution, and which, by the alumina, or whatever the active constituents of the mordant may be, is precipitated uniformly and in a most minutely divided state in the substance of the cloth. Cloth may be dyed by applying to it an insoluble coloring matter, but in this case it cannot be dyed so effectually as it is when it is first impregnated with a mordant (that is, a substance which precipitates soluble coloring matter) and subsequently drawn through a solution of the coloring matter. In the one case, the coloring matter is mechanically deposited on those parts of the cloth with which it comes into contact; in the other, it is obtained in a *chemically divided* state in all parts of the substance with which the solution comes into contact, and thus a comparatively speaking small quantity of coloring matter will effectually dye cloth

when the coloring matter can be applied to it in solution, or be deposited in the substance of the mordanted cloth.

We do not want soluble colors in cloth, for they are indeed as objectionable then as soluble phosphoric or any other acid in a cultivated soil; but what we want, and do affect in chemical dyeing and in the chemical treatment of phosphatic minerals, is to make the best and most economical use of the raw materials, which in the Arts, as in Agriculture, have to do a certain work. Believe me,

Yours faithfully,

AUGUSTUS VOELCKER.

As cumulative testimony in the same direction, the following extract from a communication, under date of the 11th January last, to the same company, by M. VILLE, of the Imperial Farm, at Vincennes, France, (another authority of the highest order) is presented:

"In calcareous soils the superiority of the super-phosphates is well established, and it is a general rule that a small quantity of it produces a greater effect, or at least as great an effect, as a much larger quantity of natural phosphate. In the great majority of soils the super-phosphate of lime is the one which combines the best; but in damp and marshy soils the precipitated phosphate is preferable."

Hereafter we propose to present some late investigations on the same subject, made by Prof. JOHNSON, of Yale College (author of "How Crops Feed" and "How Crops Grow"). The length of this article prevents it now.

It is our desire to make this journal thoroughly useful to our people, and we will spare no pains to secure information that will work to this end. If our State prospers, it must be through the intelligent use of the means placed at our command, and that this may be done the more effectually, we must avail ourselves of the good counsel of those who are able to advise.

[For the Southern Planter and Farmer.]

MESSRS. T. G. ERHARD AND MANY OTHERS FROM THE
NORTH, NORTHWEST, SOUTH AND SOUTHWEST.

Dear Sirs:—Your favors received, mostly in February, asking if Virginia is the desirable country you had seen it represented by my articles in the *American Farmer*, of Baltimore, and the *Planter and Farmer*, of Richmond, Virginia, why are our people so in debt, our lands so dilapidated, our crops so short, and some who have settled among us have done so badly? These inquiries are so numerous, I cannot, in my feeble and crippled condition, undertake to answer them separately, but will endeavor to do so the best I can through both of those good papers in which you read my other articles, with which you seem pleased, fondly hoping you may be more pleased with this, my humble defence of Virginia, my own native land. I would have replied sooner but for my hand being severely injured by a fall from my horse, and for some time could not write at all, and now write in much pain, for I am now no chicken, being over sixty-three years old, and very badly worn at that. Yet I will now try honestly and fairly to give you the desired information, so when you come to exam-

ine and see for yourselves you may have confidence in whatever I tell you. I have traveled over seventeen of the States of America. I have owned and worked lands in Virginia and in Alabama, and decidedly prefer Old Virginia to any State I have ever yet seen. Take into consideration the soil, water, climate, health and warm-hearted people. I have never seen older nor healthier, and more prosperous and generous people any where than I have well known in Albemarle county, Virginia, and before our late unfortunate war, there breathed not on this globe a more generous, warm-hearted, prosperous people than we of Albemarle county were. But, believing we were right, we went into that wicked and ruinous conflict with all of our heart and soul, body and mind, and we did in every respect all we could, fairly to secure our success, entirely forgetting our homes, our debts and ourselves, up to the surrender of our great and good Christian Chief, General Robt. E. Lee, whom we all adored with a fervid heat, not less than that adoration which so characterized the American people for the God-sent Father of our country.

When General Lee surrendered, he did it like a great and good man, (as he most truly was) fairly and honestly, and at once as the tender-hearted father of us all generously set the good example of strictly attending to his own private business. And we, like devoted children, endeavored to follow him in his pure private example, as we did in his brilliant career, through our late unfortunate conflict. Such a good example, so strict and closely followed, is not recorded in all history, sacred or profane, from good old Adam the first, to General Robt. E. Lee the first. At once every gallant soldier and civilian (and they were nearly all truly gallant) quietly laid down their war-worn weapons, disrobed themselves of their tattered martial cloaks, and like their own truly Christian Chief, retired in peace to look after their own private matters, if perchance any could be found in the great and general wreck in which we all alike were so ruinously involved. Many, ah, too many thousands of these war-worn gallants, after days and weeks of wearied travel and hunger, with the rugged roads and rocks well marked, as was the snow and ice of Trenton by the travel sore feet, of the unshod veterans of our revolution with Great Britain, on reaching the heights over-looking the spot where once stood their sweet and happy homes, paused to catch the first glimpse of the house and yard endeared by childhood's fondest memory. All, all was gone, and not a vestige left to tell where it once so beautifully stood (but the charred chimnies) with its doors ever open, wide open to welcome under its hospitable roof, the wearied and oppressed from any and every clime. There they too often thus stood sad and pale, with their proud and gallant spirits drooping over the sad reality; a home nor a country remains not to them; there they lingeringly paused and moaningly strained every power of their quick perceptive eyes to catch, if catch they could, sight of any, even the least article to memory so dear in the wreck and ruin before them. The dew of a night's long-wearied travel to enjoy the first cheering ray of the rising sun on the happy home of their childhood, and the comfortable shelter of their feeble and aged parents, was thickly mingling with the clammy sweat oozing from every pore, and oft gathering so thickly on their heavy brows had to be wiped away by their brawny hands, to see, if possible, was there not some little left of the much of beauty and

comfort they had left there. But ah, too often not a remnant remained, and many a gallant, beardless, war-worn, armless soldier, at twilight's reflecting hour, after days and nights of wearied travel, in hunger and mud, reached the endeared spot where his sweet home once was, found it all thus robed in the dark and saddening pall of total ruin. Thus like unto Campbell, poor Exile of Erin, the dew on their thin robes hanging heavy and chilled, for their country they sighed, when at twilight repairing to wander all alone over the wind-beaten hills. A country nor a home remains not to them. My dearest of mothers, my fond father, my sweet little innocent sisters too, did ye perish in its flames, or now homeless wanderers weeping for its fall?

The civilian, after the first shock of hearing our own General Lee, with his sadly thinned ranks of Young Guards, had surrendered manfully, turned, and quietly in sadness, slowly approached their once happy homes, and cautiously broke the sad news to those they so fondly loved, and the best they could, prepare them all to meet and bear their ruined condition. All, all resolved, and all, all did, most scrupulously follow the good example of their beloved leader into retirement to examine their own private affairs.

Not a cannon nor rifle, or a pistol was fired—all was quiet as the tomb—peacefully and fondly hoping for the best. Then came on the military authorities, here a squad and there a squad, thickly dotting all over our whole country, too often commanded by some bumb-proof officer, who had no more judgment, brains, nor feelings than a Florida alligator, and in the wake of these, came thick and fast squad after squad of the contemptible carpet baggers, along whose plundering route was too often sadly to be seen a vile scallawag sneaking into their ranks, to help plunder their fellow-citizens of the little left them by four long years of bloody war and wicked strife. Such times as we of the South then did see and feel, I fondly trust in God no other civilized people ever endured before, and I fervently pray God none may ever be thus doomed again. These vile menials of power, who never dared meet a Southerner in battle array, did in every way all they could to rob, wrong and insult us all. Helpless old women and children often not spared, and feeble old men often under false pretence, uselessly dragged from their homes. And the gallant war-worn soldier in his tattered gray, the only suit he had on earth, most rudely halted on the streets to be trimmed of the few brass buttons remaining. Great God! I often wondered, could this great country over which the stars and stripes had so long so gloriously waved, thus stoop to such childish insults; or was it the mere whims of these ungallant scamps to show off their brief authority. And yet, not a row, not one single disturbance. Not because they were afraid. No, no,—not so; for I have seen the muscle of the proud and gallant soldier swell, and his unflinching eyes look so keenly and contemptuously on the contemptible operator, until his trembling knees, like old Belshazzar's, would shake him to the miserable falsehood, of begging not to be blamed for what he could not help. They quietly submitted for the sake of peace and their helpless country's good, which oft times required more cool, deliberate christian courage than that they so well displayed on the heights of Gettysburg.

Then came on the convention of jack asses of every hue and color. Then the stay law; the bankrupt law, and the homestead. All of

which most sadly worsted us all,—our labor lost to us, and demoralized to themselves and every body else; and by the miserable selfish plundering carpet bagger decoyed into politics for their own advancement, and the ruin of both us and our former faithful slaves.

Thus were we rudely dealt with when called upon to settle up old accounts with interest. What an awful looming up; how awfully big and unwieldy these once little things had so wondrously grown.

Now, under such circumstances and in such a deplorable condition, can you, gentlemen, be at all surprised at many of us becoming wildly excited and ruinously dejected, when all hopes seemed perfectly prostrated, every prospect blasted, and confidence in all and every thing totally destroyed, and crowd after crowd madly rushing headlong into law, and thus uselessly tugging at each other, feelings became embittered, of which some of the old grannies at the law far on the wane of a living practice, and the youngsters too easily beguiled one after another to wickedly enter the list for plunder by a ruinous compromise, rather than a more ruinous defence of their well-known rights where not a shadow of doubt existed, and the innocent oft were compelled to pay ruinous fees to establish their rights, and too often the victor at the expensive and uncertain game at law to his sorrow found the little which could be collected had been so liberally divided between his counsel, the clerks and sheriff, there was oft no alternative left him, but in sack cloth and ashes sorrowingly to walk side by side with him he had so lately conquered at the law, into the chilly embrace of bankruptcy. These are, my dear sirs, I think the true reasons of our great indebtedness.

And now for the dilapidated appearance of our country, our short crops and the failure of some who have located in our midst. During the war our lands were sadly neglected and most severely strained to sustain the immense armies bitterly contesting every inch of our soil, which, of course, prevented our using much of the good lands in Virginia. At the close of the war we found ourselves minus all of our slaves, with a very scant supply of well-worn implements, and feeble teams, often none at all, all nearly without provisions, and too many entirely without, little or no money to refurnish these absolute necessities, and all of every thing in such a confused condition we all became sadly dejected. For the wisest could not imagine what the next would be, or when, where or how a yet greater calamity might befall us.

Now, my dear sirs, can you, or any other sane fellow-being, be at all surprised under such a deplorable state of affairs, that even we Virginians became sad and desponding, and really lost our energies for which we once were so justly renowned. And yet under all of these sad afflictions, we perhaps unfortunately too zealously hugged with tender filial affection to our dear old homesteads and its broad acres, preferring rather to part with every thing else, and even risk all, under the oft delusive hope by an extra effort, fine seasons and great good luck, we might save our lands, and thus we freely bit at every delusive bait thrown to us. Humanity oft induced us to hire too freely our faithful old slaves, and we bought liberally of labor-saving implements, of which neither we nor our labor knew anything, and our labor too oft induced wilfully to destroy for the benefit of their own craft, as the skeletons now to be seen in so many of our fields well-

testifies; then three or four of the most unpropitious seasons we have ever known, and then to top the climax far above them all, came the kind-hearted vendor of what they called manures, which to too many of us were any thing else, and for which they got their millions of our hard-earned dollars, and we got little or nothing in crops, money or improvements of our lands. Thus for the appearance of our country and our crops.

Now for the failure of some who have located in our midst. Most of these, I think, had made their money during and out of the war, and came here as mere adventurers, with but little more money than brains, feeble judgments and perfectly ignorant of every thing about farming, stock or implements; a mere set of swell-headed braggadocios smoking large cigars, drinking freely of strong drinks and spluttering about how they whipped us. Failing to meet their engagements, or to be received in our families, they left unregretted by any, unless by those they failed to pay.

Now, my dear sirs, is there any where to be found on God's favored domains one spot on which such a set could hope to succeed? They are gone back to defame, if they can, our people and our lands, of which they know just about as much as you or I know of what condiments they will use in the moon. A good many most worthy citizens from the Northern and Western and Southern States, and from old England and Germany, have located in our county, and have proved to be exactly the sort we are in so much need of. They are of that class which would be most warmly welcomed by all good men everywhere. We would so gladly welcome with out stretched arms and open hands many, many thousands like unto them. And I rejoice to say, most of them are so well pleased with our people and county that they and we fondly hope this summer and next fall a great many of their friends will follow them up and pitch their tents among us in this, our most favored land, where all, who will, can so surely well succeed.

I was introduced to a most intelligent gentleman from the North, who made a large purchase in our county a year ago, and last fall made another large purchase, in all amounting to some fifty-five or sixty thousand dollars in land. I said to him, I hoped he was pleased with our county and its people. He very warmly replied, I am more than pleased with both, and all are equally pleased with him. Some of these are doing as well as they could hope to do any where. Most of them doing well. A few good fellows made too heavy a purchase, leaving no capital for carrying on the farm, and to their sorrow, find it as necessary to have cash to farm here, as I believe it is every where else. A few Englishmen clubbed together and purchased two adjoining farms at twenty-five thousand dollars each, only paying ten thousand cash, bought recklessly heavy of stock, crops, farming implements, manure and grass seeds; hired very heavily at extravagantly ruinous wages; began heavy improvements on the faith of much money coming from England. As yet none has reached their creditors. They had a very fine crop of corn. Hired freedmen to gather it, while they were otherwise sporting. After it was in the crib, the freedmen called for pay. They said our country made a great show in the field, but woefully small in the crib. Sold out on one field of stalks, fodder and shucks, cut up and stacked in the field. They got

between 27 and \$30, from which I learn the purchaser got sixty barrels of corn, left there, no doubt, by their hirelings for their winter rations. These have left, no doubt, to abuse us and our country.

A Northern gentleman, with about \$2,000 in cash, made a large purchase of poor land at seventeen dollars per acre, paid the \$2,000, leaving no money in hand to work the farm for the deferred payments, tugged on for several years, then wisely gave up the land, and lost his \$2000. Now if he had purchased 200 acres of better land at five dollars per acre, which he could have done, and paid the \$1000, got his deed of title, worked it judiciously with his remaining \$1000, he would now be the happy, thriving owner of his own snug and thrifty home.

Another bought at \$30 per acre, because of its large and handsome house and buildings. He now wishes his investment had been made in better land and less of buildings. Another set with very limited means, or none at all, made a large purchase and were never able to repair the outside fence. Never paid a dollar, had to give up, and have gone no doubt to abuse us and our lands.

Now is it fair to judge us and our country by such an indiscreet set as these? For we have in Albemarle county, Virginia, as strong kind productive lands, as pure water and delightful climate as any reasonable man should desire, or can find any where, and for the cash, are as cheap as can be had any where. Take into consideration our churches, schools, railroads, canals, markets our people, and those who confine themselves within their means and work judiciously, are now doing as well as any people any where. Such are better off now in my own neighborhood than they were before the war.

It is the large unwieldy estates which have to be kept up by too much hired labor that are not doing so well. They must be cut up into smaller farms, or pass into other hands.

I have explained, I hope satisfactorily, and now extend for myself, and for every true Virginian, an earnest heart-felt invitation to come see and judge for yourselves, and help us to divide out our lands to the mutual benefit of all and the rebuilding of our dear old Virginia.

Yours truly,

GEO. C. GILMER,
Charlottesville, Va.

[For the Southern Planter and Farmer.]

DEEP vs. SHALLOW PLOWING.

An article in the *American Agriculturist* for January, from the pen of Col. Waring, among other very sensible observations on farming in general, referring more particularly to his recent European observations and the opportunity there afforded for testing the value of different modes of cultivation, he says of the oft and much mooted question of deep or shallow plowing:

"In view of this I applied myself during my recent trip to the obtaining of light on the much vexed question of deep plowing, one which has always had a prominent place with our writers, and about which no definite early conclusion seems probable. It has certainly

not been less talked about and written about and quarrelled about in England. When agricultural writing first commenced there it once took a prominent position, and the columns of the British agricultural journals are to this day more taken up with it than with any other topic on which opinions differ widely. Arguments on both sides are plenty—on either side, viewed by themselves, they seem convincing—and it is at least difficult to decide which has the best of the discussion. In practice, the deep plowers find comparatively few adherents, for there as well as here it is the almost universal custom to plow only to the depth of about six inches. Personally, I have always sided with the deeper faction, and I am not now disposed entirely to abandon their position. At the same time, the more I investigate the matter the less am I inclined to urge the adoption of their recommendations. There is much force in the statement of a recent English writer that if by deep plowing you convert the upturned subsoil (by the aid of manure) into a surface soil, you by covering up the surface soil convert it into a subsoil, and place its greater fertility beyond the reach of the developing action of the atmosphere and thus lose its effect. On the other hand, there is no getting around the fact that gardeners and nurserymen have great faith in the efficiency of "trenching," a process whereby the surface soil is completely buried beneath the upturned subsoil. In their cases, however, the quantity of manure used is much greater than is possible in the larger operations of the farm.

In this matter it would certainly be safer to advise that all attempts at deep plowing be very carefully made. Many instances can be cited where it has been decidedly injurious. Ogden Farm offers one of a serious character, where nearly ten acres of land was so far injured by turning up a few inches of poor cold clay that five years' time and expenditure of manure and labor to the value of more than the original cost of the land have been insufficient to make good the damage. Perhaps corresponding cases of benefit may be adduced, though I know of none that appeals so strongly to my judgment.

After considering the question on all sides, what should be our practical recommendation? It seems especially clear to me after a careful examination of the farming of some of the best parts of Europe. It is certainly true that, taken as a whole, the best European agriculture, like the best American agriculture, does not depend on deep plowing. The men who succeed the best, there as well as here, are generally shallow plowers rather than deep plowers. Many of them no doubt believe, theoretically, that deeper plowing would be better; but whatever their theory may be, their practice is to confine the turning of the soil to the first five or six inches, and to keep their manure near the surface. The only thing of general value that has been proved about the question after all these years of argument is that it has two sides to it, and I do not hesitate to recommend my readers to be very cautious how they enter into the discussion with their own plowshares. Study, investigate and theorize as much as you like, but be very slow to abandon a custom that is known to be successful for one that is of uncertain promise. I do not myself desert the deep plowing party, but, on the other hand, I do not recommend its teachings for general and immediate adoption. In many cases it will do good, but first trials should in all cases be made on a

very limited scale, for on many soils it does great harm. There are channels enough open for the introduction of improved processes which will pay without question, and the laudable energy of enthusiastic men need never lack for an object. It is the safest plan to stick to the best customs of the best farmers, until they fail to satisfy, and then to amend or alter them only as careful experiments shall prove the change to be a good one. The truth is that we know by far too little of the how and the why of vegetable growth to decide on the value of any improvement in advance of its actual trial. The way in which agricultural writers have been forced to abandon their recommendation for the immediate plowing under of stable manure, and to content themselves with finding out the reason why the opposite custom of farmers to spread manure on the surface and leave it there) was better, is too fresh in mind for any prudent man to insist that deep plowing is to be or ought to be the universal panacea of agriculture, while he can count on his fingers the really successful farmers who have adopted it, or, who having once adopted it, have found it worth their while to keep it up. Of course, the expense of deep plowing has had much influence in retarding its spread, but the expense is of itself no argument against it, and it has not been taken up where (as on the larger farms of England) mere expense is no argument against any process that is sure to pay."

Col. Waring is one of the most practical of all the advocates of high farming, now writing for the agricultural press of the country. Evidently a man of considerable attainments, he has applied himself earnestly to agriculture, and every thing he writes indicates close observation and patient investigation.

The subject here treated of is of very much interest to the Southern farmer. It is true that at present there is very little of what might be styled deep plowing done in this section. But it is so often urged upon the farmer that he can never succeed unless he stirs his soil to the depth of ten or twelve inches, that we may consider it a great relief to find that six inches has proven in the majority of cases the best depth to plow.

But there is another side still to the question, and one which we have all along advocated, (*i.e.*) the use of the subsoil plow, which will give us all the advantages of deep plowing, so far as depth of seed bed is concerned, and comes with it none of the disadvantages following the bringing to the surface a crude and unproductive subsoil. We are still more with the light of Col. Waring's European experience, the advocate of deep stirring of the soil without, however, investing it.

[For the Southern Planter and Farmer.]

AGRICULTURE.

The subject of most interest to three-fourths of the whole population, and requiring as good judgment in its operations as most kinds of manufacturing and mercantile pursuits. And after all the efforts to prosper, failure attends a large portion of agriculturists. But no such word as failure should stop the industrious farmer. Early and

late, through all seasons his plans should be thoroughly carried out. Ben Franklin is reported to have said "that tilling the soil was the only honest calling, and if judiciously pursued, success was guaranteed."

Without going to this extent, the intelligent farmer will prosper in the end, provided his land improves visibly every year; and this is only accomplished by replacing more elements of fertility than is subtracted by the crops. To do this by the use of fertilizers, a large outlay of money is required. It is reported that ten millions of dollars are annually spent in commercial fertilizers in the Southern States. Were this amount, or at the least three-fourths of it spent in permanent fertilizers, each succeeding year, would find the soil improved and more means in hand to continue enriching the land. But as in the past, so at the present day, not one-fifth of this large amount of money is spent to improve the soil, but only to make a crop.

Suppose one field in every five be given to a pea fallow, and another to clover, to stand two years, the remaining two fields to be devoted to other crops, the result would be far different from the usual rotation. Seldom having either clover or peas as a fallow.

If the old system continues, what will be the gain permanently? If a farmer makes nothing by only eight bushels of wheat or sixteen bushels of corn to the acre, of what use is it to go through the forms of carrying on a farm with all its harrassing cares, when you know the result with a great degree of certainty before-hand?

It is very easy for reviewer to say that manure, ashes and lime will improve the soil. No one doubts this truth; but a slight reference to the facts will illustrate my views. By barn-yard manure, the process is a slow one. Two horses make about fifty cart loads of manure in twelve months—about enough for one acre of land. Any one can calculate how long it would take to improve one or two hundred acres of land. Instead of this let every farmer put in ten acres of black or yellow peas, for each horse on the farm, and the results would be visible. By reference to a table published a year or two since, with some modifications—the whole subject is better illustrated.

<i>Crop.</i>	<i>Value.</i>	<i>Cost.</i>	<i>Gain to soil.</i>	<i>Loss to the soil.</i>	<i>Loss to the pocket.</i>
Corn, 16 bus.	\$ 9 60	\$12.00		8 per ct.	\$2.40
Wheat, 8 "	13.60	16.00		8 " "	2.40
Oats, 12 "	10.00	6.00		16 " "	Gain 4.00
Peas, 16 "	16.00	8.00	25 per ct.		" 8.00
Clover, 1 ton	16.00	4.00	25 " "		" 12.00

If half the peas and clover are removed then the land is yet a gainer.

Good farmers estimate a heavy fallow to contain 100 tons of vegetable matter to the acre, or a ton of clover (which is a small fallow), to be as valuable as a ton of ordinary manure. If one crop of peas does not answer to produce a good stand of clover, continue a second crop. When the soil becomes sufficiently fertile to produce clover, by all means put in the land and keep it for two or three years. The old saying attributed to the Germans is strictly true—"no grass no stock, no stock no manure, no manure no farm."

By the use of green manures with plaster and lime the sand hills of Eastern Virginia can be restored, and it becomes every farmer to

make greater sacrifices to accomplish this object than in making a temporary crop by high priced fertilizers. It is cheaper, it is quicker—it is more certain—and more easily done than by the use of chemical manures. Every one who has spent years of time and a large amount of money knows these statements to be sadly true to the letter.

As to the use of ashes, (either oak or hickory) every body uses all he can obtain, but no one can make more than twenty bushels during a winter for each fire-place. This quantity is too small as a fertilizer for a farm. Town lots and gardens can be benefited, but the only way to improve a farm in the quickest way with the least amount of time and money is by fallows of peas and clover.

Another suggestion may not be inappropriate. In a few years the cost of transportation of grain from the West may be greatly reduced by the enlargement of the Erie and James River Canals, and by similar enterprises through other States. Should this be done wheat may be reduced to \$1.40 per bushel and corn to fifty cents. In that event can the Virginia farmer afford to raise these staples at all, and if not, what crops can be substituted? In less than ten years this may be a serious matter to look in the face, and it may then be too late to commence improving the soil, when prices are below the cost of making these crops.

C. R. C.

[For the Southern Planter and Farmer.]

Mr. Editor:—In the communication sent you some days since on "Straw as a Manure, the Cultivation of Hay, &c," there were some omissions I would supply if they will reach you in time for your next number when the article referred to will appear.

It is of the greatest importance in the preparation of hay for market, that it should be done with the greatest care. First, it must be the pure timothy, free from all admixture of meadow grass, spear grass or any other kind of grass not even clover. Then the fastidious dealers talk as knowingly about the delicate shade it must bear when properly cured, as the tobacco men do in discussing the shade and qualities of the high priced wrappers that oftentimes command such extravagant figures. All observant farmers know how difficult it is to raise pure timothy hay without an admixture of other grasses. I had supposed it easier in Eastern Virginia, or on the bottom lands of James River, than in the Valley, but in a conversation with Dr. Walker, the intelligent and public-spirited farmer at Dover, son-in-law and successor of the late Richard Sampson in the management of that fine estate, he informs me that it is very difficult if not impossible to preserve their meadow grounds clean. He is one of the largest and most successful hay-raisers in Virginia, yet alleges that our Valley lands would produce two tons per acre, whilst their best lands will produce little more than one. He referred to the change in Richmond since the war, in the manner of marketing hay, that operates to the serious inconvenience and always to the loss of farmers. Formerly the hay was unloaded from the boats and put in store. Now the merchant refuses to receive it in store. Often it is sent on flats by the canal covered with tarpaulin, if covered at all, and 'n so

insecure a way, in the event of rain, that it must be injured. Let the boat arrive in the dock say Thursday evening, and Friday is an inclement day, nothing is done towards a sale. Saturday is always a busy day, the commission merchant alleges he can't get buyers together, or if so, they contend it does not possess the delicate shade referred to, or has gotten wet, or some other pretext staves off the sale until Monday or later: the boatman then makes his charge in proportion to the time the hay is on his boat, and some one of the many pretexts for cheapening the price is used as a lever to cut down the farmer, who is bled at every pore, and by all sorts of unreasonable and dishonest pretexts. Is it at all strange, Mr. Editor, that with this sort of experience in the past, he is willing to rush with open arms into the organization of the "Patrons of Husbandry" as a relief to some of the ills, not that flesh but his purse is heir to? Permit me before closing to extend to you as a "Patron" my thanks not only for the very able address my esteemed friend, Maj. Gaines, as chairman of the committee, published on the "Patrons of Husbandry," but also for the pithy, sensible, forcible editorial from your own pen on the "Duty of the Hour," in the April number of the *PLANTER*. Heaven speed the hour, when the farmer, who has in the past been "a hewer of wood and drawer of water" for other classes of society, may reap the reward of his own labor, instead of being fleeced at every turn as is now the case.

Respectfully yours,

J. M. McCUE.

[For the Southern Planter and Farmer.]

TOBACCO.

Much has been said and written on tobacco. It has been more praised and more abused than any other article, and has been more widely cultivated and used than any other single product not necessary to support life. It is a narcotic stimulant, it soothes and calms the weary husbandman, the tempest tossed mariner, the soldier in the field, the peasant and the prince, and is safer and more reliable than wine or ardent spirits to drive dull care away. Wherever civilization has carried her graceful steps tobacco has followed, and semi-civilized and savage nations have cultivated and used it. Though considered a luxury, it is now so widely diffused and so firmly established, as to be considered like tea and coffee a necessity. The federal government has imposed a tax on it, which in Virginia alone yields a larger revenue than the whole of the New England States pay.

While it can be produced in some quantity and quality all over the civilized world, it is only in the Piedmont region of Virginia, North Carolina and a portion of Maryland that it is made in perfection for chewing. Climates more North and more South produce good smoking tobacco which is destitute of body, strength and oil, and is, on that account, preferred. Our climate and soil are peculiarly adapted to raising tobacco of the finest and best quality, and no part of the world can successfully compete with us, if we bestow the necessary labor and pains to produce it. Our more Southern States have a quasi monopoly of cotton as we have of tobacco. We can raise cot

ton, but we cannot compete with the cotton belt; we can raise grain, but we cannot compete with the Western States, and tobacco must be our staple for market and for money, and we cannot glut the market with a No. 1 article, for the demand will keep up if it does not exceed the supply.

I will therefore make a few remarks on the cultivation and management of the tobacco crop, which, while it may not benefit experts, will give some ideas to novitiates.

It is all important, in the first place, to raise strong and early plants. The beds may be prepared at any time from 15th November to 15th March, but the best time is from 15th November to 25th December. Then the ground is in good order, seldom frozen or too wet, and it will require much less wood and labor to burn. I am inclined to think that a great deal of wood and labor have been needlessly wasted in burning plant beds. Good and early plants can be made by raking off the leaves in the woods, where the soil is rich and moist, and reducing it to a fine tilth, adding hog's hair, hen-house manure, or stable manure if you have it clear of grass seed, as when corn-todder and grain only is ted in the stables. A heap-
ing tablespoonful of seed should be sown to each 100 square yards, and soon after the plants begin to come up, half the quantity should be sown on the same beds,—the first sowing should be done as soon as the beds are prepared. During the growth of the plants they should be frequently manured with hen-house manure, ashes, plaster, tobacco dust or any rich manure clear of grass seeds, and if unfortunately grass and weeds should infest the beds, they should be carefully picked out. If you will cover an old bed with leaves or straw so as to smother all vegetation, the same bed may be used successfully for many years without the necessity of burning. To make good tobacco the land should be rich or well-manured, for which purpose there is nothing equal to stable manure. I have succeeded very well by covering the thin land with wheat-straw or leaves from the woods, fallowing it in during the fall, or as early as practicable; then in the spring, before planting time, giving a top dressing of stable manure, not heavy, because few have enough to go over once the quantity of land they cultivate in tobacco. All kinds of domestic manures, composts, farm pen manures, dunghill scrapings, ashes, lime and plaster may be used to supplement the stable manure, but carry that over as large a space as you can. If you want to spend two dollars to make one, save trouble and buy commercial fertilizers, and apply them.

After your land is manured refallow, harrow and get the soil fine and light, to be ready to plant as soon as the plants are large and strong enough to live when transplanted. Bottom land not subject to freshets or sobbing makes the very best tobacco, and seldom needs much manure.

Some plant in drills, but I prefer hilling, which can be done rapidly, if properly prepared for it. The rows should be $3\frac{1}{2}$ feet apart, and hills 3 feet in the rows. After planting, as soon as any grass or weeds come up, commence working the ground and repeat it often, so as never to let the grass get a start. As soon as the tobacco gets large enough to top, commence by priming off the

bottom leaves up to five inches and leave ten leaves during the month of July, then to 15th August leave nine, then to 15th September leave eight, after that time do not prime any, but take out the bud, leaving as much as is likely to make leaves of good size, to be put when stripped with the lugs. They will increase the good appearance and value of the lugs. Meanwhile the worms and suckers should be taken off at least once a week or oftener. Saving the priming leaves will hardly pay for the labor. If they and the suckers are left on the ground they enrich it and help to make a good crop of wheat, which rarely fails on tobacco land, and a stand of grass is almost certain.

As soon as the tobacco is ripe, cut it, but not before, except when positively threatened by frost, for green tobacco is better than none. The cuttings should be repeated in good seasons, weekly. As far as you can, put all of each cutting together or in the same house. There is apt to be a shade of difference in the color and quality and curing, which will increase with every cutting. When cut in hot weather, it should be picked up very soon and secured from the direct rays of the sun, which is apt to burn it and set a green color in it. It should be handled carefully, avoiding bruising or breaking it, and if you have a sufficiency of house room, hang it in the house without crowding on the sticks or tiers. It should be examined every day, and if it sweats or the stems become rigged or mouldy, build small charcoal fires under it, just enough to warm it moderately and yellow it, and gradually dry it, thus curing it sound and sweet. If you cannot get charcoal, a little dry seasoned old-field pine wood may be substituted for the same purpose carefully and moderately. It has very little smoke or scent, and answers the intention next to charcoal. After the tobacco is thoroughly cured, stems included, you may take it down in pliant order and strip it, tying it in small neat bundles with leaves of the same length and color.

In assorting, four kinds should be made, the long, heavy dark or brown, the bright of good size, the short and the lugs. If high in order it should never lie in bulk long, except in the coldest weather. It should be hung up in the first spell of moderate damp weather, and thoroughly dried and taken down in good order in a warm spell in February or March. It may then lie in bulk until the weather becomes uniformly warm in May or June. Then it should be re-assorted, straightened and classed, putting all separately of the same lengths and colors together, and all the very short or inferior with the lugs. It is highly important to prize each class to itself, so as to make each hogshead as uniform in size, color and quality as possible. This plan will pay a large profit for the labor. This, however, is difficult for small planters who have half a dozen sorts and only one, two or three packages.

Some have been accused of nesting, and justly so in a few instances, but many do it unavoidably or from ignorance, putting in the same package every kind they have until they put all in, and the buyers generally pay the value of the worst part they see and so a loss comes to the unwary. Planters must be educated and taught what is expected of them in the market, and it will pay well to an observing man to visit the market and see for himself

when he sells his crop, and not leave his interests, his years' labor too much in the hands of a middleman.

To the industrious and skilled planter, there is yet promise and hope—he will succeed if he will but use his opportunities wisely. “Seest thou a man diligent in his business, he shall stand before kings, he shall not stand before mean men.”—Solomon.

W. A. G.

[For the Southern Planter and Farmer.]

Editor Southern Planter and Farmer :

On the 27th of May 1870, I selected a portion of the border in my garden, of uniform fertility and equal advantages, had it well broken and leveled nicely, and with a trowel made four trenches four feet apart, one, two, three and four inches deep, and in each I dropped eighty-five cotton seed in a straight line one inch apart and covered accurately.

At sunrise, June 1st, I noticed the seed in the first row, one inch deep, had cracked the surface the whole line, and in the afternoon (71) seventy-one seed unfolded above ground—shed seed caps above ground. The plants looked very vigorous.

June 2d—Noticed that the seed in second row had cracked the surface, in one place and on the 3d of June twenty-four (24) seed unfolded above ground; failed to crack the whole line; shed seed caps above ground near the surface; plants looked less vigorous than those of the 1st row.

June 5th—Noticed that twelve (12) seed unfolded above ground in the 3d row; failed to crack the surface and shed seed caps below the surface; plants looked less vigorous than either of the first or second rows.

June 6th—Noticed that three (3) seed unfolded above ground; shed caps below surface; plants resembling those of the third row.

RECAPITULATION.

1st Row, 1 inch deep.	June 1st.	71 up.	71-85
2d “ 2 “ “	“ 3d.	24 “	24-85
3d “ 3 “ “	“ 5th.	12 “	12-85
4th “ 4 “ “	“ 6th.	3 “	3-85

Total up 110 Total planted 340

The maturity and growth in favor of the shallow planting.

From this experiment I am convinced that to secure a good stand of cotton it is only necessary to plant very shallow, half inch if possible, and only one seed to the inch in straight line.

Very Respectfully,

W. L. FAISON.

LORD BACON ON GARDENING.—God Almighty first planted a garden, and indeed it is the purest of all human pleasures. It is the greatest refreshment to the spirits of man, without which buildings and palaces are but gross handiworks, and a man shall ever see that when ages grow to civility and elegance, men come to build stately sooner than to garden finely, as if gardening were the greater perfection.

Horticultural Department.

MANURING TREES AND VINES.

It has been a favorite method with most writers on the subject to manure trees and vines in the fall. Most of them recommend spreading manure over the roots at the beginning of winter and working it into the ground in the spring. This is, perhaps, good advice where manure is plenty and cheap, but we should never think of following it if manure was an object. Much of the fertilizing properties of the manure would of necessity be washed out, some into the ground and some, alas, away upon the surface to adjoining lands or roads. It would be far preferable to apply the manure upon the freshly worked surface in the spring, mixing it with the top soil by using the hand-rake or harrow. The spring rains would dissolve it and carry it down to the roots just as they needed it for vigorous early spring growth, and they would thus have supplied, to them, at the very time it was most needed, the food necessary to perfect the fruit and form wood for bearing another year. Peter Henderson, in "Gardening for Profit," gives a case exactly in point. In manuring an asparagus bed with super-phosphate, he put on part of the bed in the fall and being interrupted did not dress the remainder until spring. The same amount was used on each plot, if we remember aright, and yet that dressed in the fall showed no perceptible increase from the dressing, while that dressed in the spring nearly doubled in size and quantity of product. The most palpable benefit we have ever witnessed fell under our observation last year upon a peach orchard set in April. Super-phosphate was sown in June at the rate of about one pint per tree, worked into the surface around the trees. The trees thus treated made double the growth made by those not dressed—two rows, 32 trees being left to test the value of the fertilizer. The fertilizer used was Powhatan Raw-bone and the test was eminently satisfactory.

Kamit is an excellent fertilizer for peach trees and grape vines, and we believe it would pay very well to use it at the rate of 400 lbs. per acre. Stable manure is of course the best of all upon poor land, but there are many places where the use of commercial fertilizers would be cheaper and more satisfactory in their results. Our own experience, extending through nearly twenty years, convinces us that about 100 lbs., mixed nicely with the surface soil in the spring, will give better results than twice that amount applied to the surface in the fall.

After writing the above we found the following from Thomas Meehan, published in the *Weekly Press*. We need not say that we consider Mr. Meehan the very highest authority upon this subject:

"People often argue whether it is better to manure trees in the fall or in the spring, but we think that any one who tries it will find that the summer is as good a time as any.

It is only a few years ago that it has been discovered that plants are like animals in this—that they, while appearing to be expending their daily nourishment on continuous growth, are really at

the same time laying up food for to-morrow. Those who have examined vegetable cellular structure with a microscope, tell us that the formation is exactly like that of a honeycomb, the cells lying together of a hexagonal shape, as if made by bees. But it proves that this structure is more like the illustration than those that used it suspected, in this—that as in the honey-comb, honey is stored up for use at a further time, so matter is stored up in these little plant cells for the future use of the plant. There are in almost all plants two growths during the season. The first growth is formed almost wholly from the matter stored up in the cells of the previous year. After midsummer, especially in the apple tree, the whole of the force derived from the past year is expended, and it stores up a little for a new growth, which is soon after made. As the season progresses, the latter or secondary growth also in turn lays up some matter in its cells, for the next season, as the past season has done.

Trees always like fresh food as well as animals; and thus it is with this explanation, that one can readily understand how it is that a top-dressing of good manure put under the trees soon after midsummer, when the second growth is about to take place, produces the marked good results we have before recorded."

RAISING LIMA BEANS.

This is a favorable vegetable with many, and yet the trouble of raising them deters persons from attempting to do so. The ground selected should be such as will produce a good crop of corn.—Light loamy land is best and if heavily manured for some crop the previous year it will be better than to apply fresh manure directly to the crop. Break the land well in April and lay off the rows five feet apart, passing at least twice in a row to make the furrow deep and clean as possible. Take an iron bar, or if you have none a wooden stob will do, and make holes in the bottom of the furrow for the sticks. These should be set four feet apart and at least seven feet long, as they will be sixteen inches in the ground. Set the sticks firmly in the holes and leave every thing in this condition until planting time, which will be as soon after the 1st of May, as the weather gets settled and warm. When ready to plant, take a plow and throw two furrows on each side to the poles and plant from seven to ten beans around each. If the ground is inclined to bake, it will somewhat facilitate their coming up, if the beans are placed in the earth with the eye down. When all are fairly up, thin to three in a hill; cultivate well and keep the vines up to the poles and when they reach the top pinch out the end bud and keep them down to that height. It is best to set aside a few hills for seed and take no beans from them. The remainder should be picked as fast as they get in condition to eat, as they will bear a great many more than if permitted to ripen the first crop.

Stock Department.

WHAT STOCK WILL SUIT US BEST ?

In answering the above question, which comes to us from a valued correspondent, there is a great variety of possible circumstances to be considered. In the first place, much depends upon the quality and condition of land, the amount of capital at hand to be invested in stock, and the available form to take care and provide feed, &c., for the stock. But we do not propose to return a special answer to the query, but to give some general thoughts upon the subject applicable to the condition of the land and land owners of Eastern Virginia and North Carolina.

It is generally conceded that the raising of horses, mules and hogs beyond a sufficiency for home supply cannot prove profitable here, except in a few favored localities, and our choice in the selection of stock is between sheep and cattle.

It is a question of interest to know at the start the relative amount of feed necessary for the keeping of these animals. Frequent experiments have established the fact that it requires about three per cent. of the live weight of either of these animals, of good hay or its equivalent per day to keep them in good condition. Assuming the average weight of our cattle to be 700 lbs. and of the sheep 66 lbs., it would require 21 lbs. of hay for each cow and two lbs. for each sheep per day. In other words, one cow will eat a little more than ten sheep.

But we do not think this a fair comparison. It should be remembered that sheep eat a much greater variety of plants than cattle, and as our pastures are thin and the herbage scattered the distance to be traveled by an animal in filling itself should be considered. In this respect, the sheep have decidedly the advantage, as each one would only be required to graze over one-tenth the ground the cow must necessarily go over in order to make a living. Sheep also crop closer than cattle, and where the pasturage is kept close they will thrive much better and improve the herbage by encouraging the growth of the finer grasses, or at least repressing that of the coarser growing kinds.

A short time since, we were in company with an old farmer, who remarked that wherever his sheep ran, the white clover soon sprang up, even though none had ever been seen there before, and he expressed a desire to know where the seed came from. We then said that we supposed the sheep gathered the seed in their rounds and deposited it with their litter. But this he seemed disposed to doubt, as his cattle ranged over precisely the same ground and they brought no clover home. The subject was dropped at the time; but, subsequently, when passing through the old broom-straw field where his sheep and cattle ranged, we stooped down and examined closely, and there growing not more than an inch in height—far too short for the cattle to bite—were perfect plants of white clover, bloom and all. Here the sheep gathered the seed, and dropping them with their litter, set every place where they were accustomed to lie in white clover. This advan-

tage to be derived from the keeping of sheep over that of cattle is very great, as it is one of the greatest difficulties we of Eastern Virginia have to contend with in improving our farms.

We cannot, without very expensive manuring, secure a good sod upon our pasture lands. But it is a well-known fact that sheep soon establish a good sod wherever they are kept. We are satisfied from a careful inquiry and very close observation, that upon the ordinary farms of Eastern Virginia twelve sheep can be kept more easily than one cow. It is more difficult to estimate the relative return, likely to be realized from the two. It is very hard to tell what would be the gross yield of cows in Virginia, as the amount of labor necessary for their care, the feed given, &c., differs in almost every family. We leave this for every farmer to estimate for himself. With sheep it is somewhat different. If the flock consists chiefly of ewes, they may be expected to almost, if not quite double their numbers every year, and the wool 4 lbs. per head, at from 40 to 60 cents per lb., would much more than pay all expenses.

It is apparent to us that sheep, must of necessity, yield a much greater profit for the labor and capital involved than cows, and under present circumstances, we hardly think that the keeping of sheep in small detached flocks will prove remunerative. Dogs are far too plenty for sheep, unless protected by the constant watchfulness of the shepherd to prove profitable. But still we think there is a way of surmounting this difficulty, even should the Legislature fail to pass such a law as will give the protection required. Two or three farmers can very readily club together and buy enough sheep to justify the employment of a shepherd to take care of them, and thus utilize the waste land lying out and yielding no revenue, not even enough to pay taxes.

Upon farms that are fenced, sheep can be kept safely by bringing them up near the house every night and putting them in a small well-littered lot, enclosed by a six foot picket fence with the bottom plank sunk into the ground twelve inches. If the flock has a dozen or so bells upon a flock tends also to keep dogs away and the noise they make will give the farmer warning when danger is at hand. Sheep kept in this way require very little actual labor in their attendance, and after trying it several winters we think that, personally, we would rather attend one hundred sheep than two cows. It requires comparatively a small amount of capital to stock a farm with sheep, and even a few purchased and judiciously managed will soon, by their natural increase, give a good flock. In conclusion, we think that no stock with which we are acquainted is so well adapted to the condition of the farms and farmers of the country referred to as sheep, and further, that with the general introduction and keeping of sheep upon our farms will begin a new course of improvement and prosperity among the land-owners of the State.

GOATS.

There is still another kind of stock whose name has long since become a synonym for every thing that is mischievous and provoking

upon a farm, and which is nevertheless adapted to meet the wants of some sections, and which might be made profitable. We refer to the common goat. These animals are valuable for their hides, which are made into morocco for shoes and kid for gloves. The hides, at any age, are worth one dollar a piece, and the demand for them is good. They are hardy, easily kept, and very prolific; generally bringing forth at least twice a year, and more frequently twins than otherwise.

They do not require as much grass as sheep, as they subsist through the summer almost exclusively upon browse. In districts where there is a great deal of rough broken, wooded land they would thrive better than sheep, and they are far less liable to incursions from dogs or foxes than sheep. They will travel much farther for their food, and will be sure to return to the fold at night and upon the approach of a storm. They require less food and attention than sheep, and are recommended when on account of the roughness and wooded character of the land sheep cannot be well kept.

CASHMERE GOATS.

These have been kept to some extent in Missouri, Kentucky, Tennessee and Georgia, and by a few persons in Virginia. They are claimed to be more profitable than the common goat, or even sheep. They yield a fleece of soft, fine hair, weighing from three to eight pounds, and worth from \$1 to 1.50 per pound in New York. They are hardy and about as prolific as sheep and require about the same care. They cross readily with the common goat, and the third cross gives a very good fleece. They have not been bred extensively enough to test their value as farm stock, but we are inclined to think very favorably of them from what we have seen.

We will be obliged to any of our readers who will give us more information about them. It is apparent to all of us that we must find something beyond the animal product of the ground to increase our incomes and enable us to keep the sheriff at bay. We can think of nothing that will so readily meet our wants and secure at the same time what ought to be the great aim of every farmer, the permanent improvement of the land as the keeping of some kind of stock. With this view, we invite a discussion through the pages of the *PLANTER* of the merits of the different kinds, and also the best ways of caring for them.

[For the Southern Planter and Farmer.]

A LAW AGAINST DOGS.

But for being unwell I should have written an article for your April number of the *PLANTER AND FARMER*. When one looks over the many warm appeals so ably and earnestly made from all over our State to our representatives in the Legislature and Senate, to give us the protection so justly due to the great interest Virginia now has in sheep, and not a movement having been made in its behalf worthy of statesmen

in so weighty a matter as it most certainly now is to protect our sheep from the worthless dogs, and too often their more worthless owners, is it not now time for us all to resolve and unite ourselves into a full working force to secure our protection in the quickest and most effectual manner we can? I think it is now full time for us so to act, as either to secure a more respectful hearing from them, or to look to some other power to give us the full protection, which will enable us all over Virginia to reap the full benefit which our lands and climate so justly entitle us to hope to be able fully to realize from a full stock of sheep on our ample grasslands. The Legislature must be sorely perplexed in looking up subjects for taxing when they stoop to the unheard of and unpaying article of churches, which could yield but little, and that little forced out of a set of good people already so sorely weighed down by their own individual taxes and then the volunteer support of the ministers, the Sunday schools, and which we all know and so sadly regret, have been so poorly provided for in these last several years, when there looms up all over Virginia and America the greatly remunerating subjects for taxation in dogs, whiskey, and almost an innumerable number of small and big rogues now so busily swarming throughout our whole land.

Suppose we put the dog tax at one dollar for the first, and two for the next and four for the next, and thus keep on doubling, what an amount could and would be thus secured for our dear old State, now trembling under the dread of repudiation for want of increased taxes. Not only this great amount would be secured, but what a vast healthy addition would be cheerfully added on to it in a few years when all of our lands would be (as it then would) thoroughly stocked in the grasses and our improved and greatly increased flocks of the best sheep the world can produce. But some of the little fry cry out if this is done, the foxes will soon be as fatal, not only to our lambs, but our pigs and poultry. Could not this be perfectly secured against by permitting one proper person selected by the people in each ten miles square (or five miles), who should be allowed to keep a good pack of well-trained hounds at one or two dollars each, which would be so cheerfully paid by those whose sheep he would protect by catching the foxes, this selection to be made only by those who would agree to pay the taxes on said pack. This would be a paying tax to Virginia and to each and all of her citizens in greatly relieving the State, by its immense income and furnishing her citizens with the best of meats and warmest raiment the world affords, at so cheap a rate all might luxuriate most freely in both.

Great God, in tender mercy, please endue our representatives of Virginia with brains enough thus to see its vast importance, and long enough to devise and pass such a law for the good of our oppressed people! Should our Legislature refuse, then can't the farmers of all America unite and petition the Federal Congress to make the tax on dogs and take the revenue from it; it will amply pay them and greatly bless every citizen. If this can't be done, why not get our Legislature to pass a law making the death of every dog from home lawful, and requiring all dogs on the public roads to be killed, which would require every man to keep his dog at home, where alone he is worth any thing, if of any value any where. If none of these can be done,

then can't some plan be devised for shortening the crop of dogs now vastly too great for the peace, safety and prosperity of us all.

Now for whiskey, that is an article a vast majority can do far better without than with, and the higher it can be taxed the better for a vast many. Then the little rogues of every hue and color now swarming in such destructive numbers every where to the great annoyance of the quiet, peace, prosperity and happiness of every good peaceable, honest citizen in every part of our country, in every hamlet, town and city of America, nightly fearing lest his house should be burnt or entered, his store or grocery, meat-house, corn-house, barn or mill, stable, hennery, sheep fold, pig sty be broken in and the honest earnings of his daily labor be appropriated to the sumptuous revelries of these nocturnal pests, who are either asleep or busily concocting cunningly devised schemes each and every day, to be adroitly executed whilst the honest wearied are at rest.

Now suppose we wake up and fully arouse our Legislature and call their attention especially to these numerous and rapidly increasing petty pilferers, and get them to pass some stringent laws by which the theft of a single pullet shall fully entitle him or her to a link in the chain-gang for one month's hard and careful labor on our county roads, and for a pig or mutton some six or twelve months, and so on and upwards.

Bless me! my friends, only think of what an immense army of profitable laborers we would soon have on our expensive and imperfectly worked county roads, if this scheme could be fairly and honestly put into full operation, as it can and should be. Soon, very soon our county surveyors would be called out and busily employed in carrying out new and better located roads for this army of cheap labor to perfect greatly to their benefit and to the great benefit of our whole State, because it would be making honest and good citizens of these now abandoned rogues, and rendering it a pleasure for we farmers to drive our own fine teams with their heavy loads so safe and easily over these wisely graded and well constructed roads. What a great universal blessing this would be to us all. Fifteen or twenty miles to market then would not be so much as four or five now are: then our lands would at once rise fully up to or beyond the good old prices, and be dirt cheap at that; then our once the best labor on earth, but now wasted into idle wandering rogues, would rapidly be reinstated to an honest faithful reliable help of which Virginia would again be proud, and we all marching on hand in hand together, rapidly rebuilding our dear old State up to and far beyond what she once was, the happy, happy home of the good and the great. Then we would no longer want a donation from our impoverished treasury to outfit commissioners to electioneer in foreign ports for immigrants to come to ours, the most favored lands of all America. For then just as certain as lovely, cheering spring follows dreary winter, just so certainly will the good and the great from every where crowd the vessels which can most speedily, safely land them on Old Virginia's shores. This is no fiction, no fancy of a bewildered brain; it is a stupendous fact, and certainly within our reach, if we can only wake up our representatives, and clear their minds so they can know their duty, and fully arouse them that duty promptly and fully to perform.

Now only compare this system with the penny wise and pound fool-

ish system which our tinkering Legislatures have been trying. This system under the supervision of such men as the old Roman, Mr. Joseph R. Beal, of Scottsville, Albemarle county, Va., with a paying salary, would very quickly put all of our roads in apple-pie order, at a very slight cost and, at the same time, would perfectly manufacture out of these now abandoned and most worthless rascals the very best of honest, faithful laborers and good reliable citizens. Whereas the present plan of hunting up the rogue, getting out the warrant, summoning witnesses, getting him committed to jail, to be tried next court or a court or two afterwards, at heavy expense, and great labor, trouble just to be imprisoned a few weeks or take thirty-nine stripes, as he may choose, the latter most often selected, and he is taken to the whipping-post, surrounded by crowds of young rascals to see how manfully he takes the dose which they applaud, and the culprit turned out a far worse man than before—thus exposed to what he can so easily repair by a little mutton-suet, which he selects out of some flock on his way home—thus making a more cautious rogue of him, and encouraging many others to go and do likewise. A miserable farce, unworthy of a Legislature of school boys, and totally unequal to the pressing necessities in which we are so deeply involved.

Query: I wonder if that colored representative was not wrongly quoted in saying when we touch whiskey and dogs, we touch every man. Rather did he not say when we touch whiskey and dogs we rudely probe to the quick a large majority of this, our body, one would certainly suppose so from the childish play of that body of late, in taxing bachelors, marriages, churches and licensing grog shops, farro-banks and lottery dealings, as if they were afraid the dear people would become too sober and purely honest to send them back to their six dollar cribs.

Respectfully,

GEO. C. GILMER,
Charlottsville, Va.

MUIRKIRK HERD.

We regret to learn that the sale of this valuable herd of Short Horns advertized to take place on Wednesday the 13th of May, is the result of a determination on the part of Mr. Coffin to discontinue the business of breeding Short Horns. Mr. Coffin is so situated that he is compelled to subsist his large Stock entirely by soiling which requires so much of his time and attention that for the sake of his other business he is compeled to dispose of his cattle.

His stock are exceedingly well bred, combining strains of the very finest blood in the country. The herd has been carefully selected from the best breeders of England and America. Among the females are four Gwynnes now so popular among Short Horn breeders everywhere. One of these, Masterpiece, is getting along in years, but is still a very fine animal; the others are young. The upper crosses of these animals are generally with Bates bulls, but one of them, a calf, is by Royal Britton, a pure Booth Bull, will show the effects of this cross. Mr. Coffin believes strongly in the Booth blood

and after seeing his two bulls, Lord Abraham and Royal Britton, both of this strain, we are very much inclined to coincide in his choice. There are also two females descended from imported Red Rose, having a large infusion of Princess blood, perhaps the best milking stock among the Short Horns.

Imported Portulacca, an exceedingly fine red cow, is full sister to Potentilla, a celebrated prize heifer.

Two heifer calves of Portulacca, one by Lord Abraham (29056), the other by Royal Britton (27351), are also offered for sale.

We have only space to refer to a few more of the more prominent animals. Elvina 3rd, a very fine red and white cow, bred by S. W. Robins, Withersfield, Conn.

Water Nymph, bred by Walcott & Cowbell. Rosamond 9th, an extraordinarily fine animal, bred by the same gentlemen and gotten by Royal Britton, and many others equally as worthy of special notice.

There are in all 42 females offered and we think that there are very few herds, either on this or the other side of the water, that would not be improved by the addition of almost any of them.

At the head of the list of bulls stands Lord Abraham (29056), bred by Mr. Torr of Aylesbury Manor, England. He is deeply bred in the Booth blood and is a handsome, low, well quartered animal and an excellent breeder. There are 11 other bulls offered, making in all fifty-four head of very finely bred animals.

Muirkirk is on the Washington branch of the Baltimore and Ohio railroad, and trains pass from the respective cities within 100 yards of the dwelling every hour in the day. There will be no delay on account of weather as ample shelter has been provided for all who may come. We hope to see Virginia largely represented and a great many of the animals of this splendid herd brought home by our breeders.

[For the Southern Planter and Farmer.]

THE PROPOSED LAW FOR TAXING DOGS.

I am perfectly willing to see dogs taxed in any way you can reach them, because they may be made to yield revenue either by the amount of the tax, or, if their numbers are decreased by the taxing in consumption. But I think too much stress has been laid upon the tax in connection with its supposed influence on sheep and wool growing. Suppose the tax is paid, then the number of dogs is not reduced, and it is to the sheep just as if the dogs had not been taxed at all.

Now in my experience, and no very short one, I am convinced that sheep can be raised successfully at present, when we are overrun with dogs. I grant that they are in one sense an evil; but if their existence and their depredations cause farmers to take precautions against them, i. e., to take care of their sheep, there is pro tanto an advantage in them. But really there are other effective means of getting rid of the nuisance, at least to a great extent, means that I have employed, and shall continue to employ, no matter what law may be passed to remedy the evil. These means all resolve themselves into the one simple expedient of killing the dogs. This may be done

either before or after they have killed the sheep; and I prefer to do it before.

My rule is a very plain one. Any decent white man is at liberty to hunt on my land any sort of game he pleases, foxes, hares or birds. I never object if he does not take his dogs among my sheep, or shoot too near my dwelling or other houses or my straw or hay ricks. But in consideration of this free permit, I expect him to keep his dogs from my plantation at all other times, and if they are ever caught on it without their master, I kill them or have them killed. So far I have never had any serious trouble with any one; for all admit that the rule is a reasonable one. Negroes are not permitted to hunt on the premises under any circumstances.

Notwithstanding that a goodly number are generally killed under this rule each year, I still suffer occasionally by the killing of my sheep, especially in the yearning season when dead lambs, &c., attract the dogs. But whenever a sheep is killed by a dog I make a pen—occasionally keep one for sometime—into which the sheep is put, being dragged along the ground so that the carcass can be trailed by the dog, that is sure to come after him after he has killed him. This pen is a trap of rails—one with a rail floor is best, so that the dog cannot scratch out—made about twelve rails high, each course being drawn in so as to have a small opening at top, down which the dog may jump, but up and out of which he can neither crawl nor scuffle. The carcass of the sheep may be poisoned, or scraps of fried meat poisoned with strychnine may be scattered outside; or the dogs may be killed in the pen. It is very true that some dogs may be destroyed in this way that had not killed the sheep. But what business have they on my premises? And what right have their owners to require that my property shall be exposed to risk because they do not choose to look after them? Any man who values his dog and respects my rights, can protect both by putting a chain and clog on the dog, worth at the outside fifty cents, or one-sixth the value of an average sheep.

But important as the tax on dogs may be, I am enabled to declare, as far as my experience may form a basis for the opinion, that the injury done by dogs is very much less than is supposed. I mean that as compared with the loss on the crops usually grown, the loss in sheep by dogs is not as heavy an item as is generally thought. One illustration of this may suffice to explain my view. At one period since the war I had for three years an average of rather more than 200 ewes per annum, or the equivalent of, say, 600 for one year. The lambs raised from them were about 80 per cent. of the whole number, or in all 1,080 head. For two of those years I lost not one by dogs. The third year I lost 17; all at one time; worth, at \$4.00 per head, \$68. The entire flock at the same price would be worth \$4,320. So that the loss was only $1\frac{1}{2}$ per cent. I need not enter into any calculation to show that the fluctuation in any crop we grow is far greater than that.

I leave out of this account the sheep stolen by negroes. Though I think I lost in the same time less by theft of sheep than by theft of crops and of other live stock, including one horse, worth fifty sheep.

I well recollect that some twenty years ago I lost 54 sheep out of a flock of 150 by a good neighbor's hound puppies. This was about one-third of my flock. But more than once have I lost by casualty

of the seasons not less than one-half of my wheat, corn and oats, and lost thereby more than the profit on the crop.

Whilst I say then tax dogs, to death if you choose, I say with more emphasis do not commit the error of believing that you cannot raise sheep until you lay such a tax. It is well at least to increase our staples by prudently the item of sheep, and make ourselves in so far independent of our labor demoralized as it is by freedom, Radicals and railroads.

FRANK G. RUFFIN.

SUMMER HILL, *Chesterfield, April, 1874.*

Mr. Editor:—Will you or some of your correspondents give us a cheap, safe and efficient recipe for killing ticks on sheep and much oblige
SHEPHERD.

Ans.—Dip the sheep after shearing in a decoction of tobacco and taking care to prevent its getting into the eyes; or, a weak solution of carbolic acid—good strong suds made with carbolic soap.

WE HAVE been informed that our friend, Dr. T. J. Wooldridge of Hanover county, has recently received a very fine Essex Boar, bred in England by G. M. Sexton, Wherstead Hall, Suffolk, who is now acknowledged to be one of the most successful breeders of Essex hogs in that country. We have not seen the animal in question, but from the reports of parties who have, we learn that he is a beautiful specimen of this favorite breed. This together with former importations of the Doctor from England and Canada, will make his collection of Essex swine very complete.

[For the Southern Planter and Farmer.]

PROFIT OF SHEEP RAISING.

You request I shall give my opinion and experience in sheep husbandry. I kept a small flock of sheep before and since the war, as was then the custom to supply the family with wool for clothing, but not as a revenue. In June 1870, having only 9 sheep remnant of my old flock left by rogues and dogs, I bought and added to them 200 Western sheep; 60 of them bucks and young weathers, at a cost of \$3 a piece or \$627 for the flock of 209 sheep at home. They were not selected with much care. The loss that fall by rogues and death was considerable. The ewes were tupped by the Western bucks and 2 young Cotswold bucks that autumn. In December the bucks and weathers were separated from the ewes and given about one half bushel corn per day till middle of March. The yearlings, bucks and weathers did not fatten well; grazing was pretty good without hay; sold March 15th for \$200, lost 3 by carrying on cars: a low price and heavy market. Sold 100 lambs for \$250 and wool for \$200 in June (\$650): have left 134 ewes and late lambs. In June 1872 sold lambs and wool from this flock for \$750, leaving 158 ewes and lambs. In November following added 45 very common lambs and old sheep at a cost of \$100,

and in June 1873 sold lambs and wool for \$613, leaving me 190 sheep and late lambs. In this report there is no account of loss by death, rogues or butchered at home, which amounted to fully an average, under any circumstances where there was not special attention given. The sheep left were worth \$3 a piece or \$570. Give below statement of account including sales and costs of grain fed and interest on capital invested :

Sales of mutton (57) in March 1871.....	\$200.00
Sales of 100 lambs and wool in June 1871.....	450.00
Sales of lambs and wool in June 1872.....	750.00
Sales of lambs and wool in June 1873.....	513.00
Value of 190 sheep left (1873) at \$3 a piece.....	570.00
	<u>\$2,583.00</u>
Cost of 209 sheep in June 1870.....	\$627.00
45 sheep in November 1872.....	100.00
Value of 45 bushels corn fed muttons in winter 1871, at 60c....	27.00
Value of 100 bushels of oats fed ewes in winter 1871, at 50c.....	25.00
Value of 400 bushels oats fed ewes in winter 1872.....	200.00
Value of 3,000 lbs hay fed ewes in winter 1872 at 50c.....	15.00
Value of 300 bushels corn fed ewes in winter 1873, at 60c.....	180.00
Value of 600 lbs hay fed ewes in winter 1873, at 50c.....	30.00
	<u>\$1,204.00</u>
	\$1,379.00
Interest on \$627 two years \$75.24 and \$727 \$40.62.....	<u>\$115.86</u>
	\$1,263.14

The hay was not all eaten, sheep were permitted to stacks at will to feed and shelter, so a considerable quantity was trampled down and converted into manure.

I omitted to state the ewes after the first year were tupped by Cots. wold bucks generally though my neighbors common bucks did get in with them each of the two last seasons and yeaned generally during the month of February.*

You will see the balance due sheep \$1,264.14, which is a greater profit than I could have made from any other stock. I did not include in the account against sheep any charge for grazing or attention, for I am satisfied the improvement to lands by manure is fully equal to that. Sheep usually seek the highest and driest places to rest where the manure is most needed and in this the transportation of manure is saved. I fully agree with my friend Col. F. Ruffin that we should sell off our lambs as early as possible, so as to give time to fatten ewes for the market the following autumn and in this way change our flocks every year. My experience is that after 3 years the same flock of sheep will naturally decline and die off rapidly.

R. P. GRAVES.
Orange county, Va.

* I omitted to state the sheep were grazed with about one hundred head of cattle and thirty head of horses entirely upon 275 acres of land, divided into three fields, changing them from one field to another.

Poultry Department.

HOW TO SUCCEED WITH POULTRY.—Mr. B. Tegetmeir, in the "Journal of the Bath and West of England Society," says:

"The great drawback against most of the farmyard poultry, is the want of size. This may be remedied by keeping better breeds, provided the chickens are well fed from the very first. It cannot be too strongly impressed upon the rearers of market poultry, that large framed birds cannot be hoped for if the chickens are not well fed from the very first day they leave the nest. It is not enough to put the hen and newly-hatched brood under a coop, and throw them some tail wheat two or three times a day: such treatment will never make large birds. During the hatching the hen should be left undisturbed; the young chickens should not be removed from under her as they are hatched; but when all are out, and quite dry and strong, the hen may be cooped in a dry, sunny spot, and a good feed of corn and soft food given to her. The chickens want no food for many hours after they are hatched, as they are then digesting the yolk of the egg, which constitutes their first food, and acquiring strength to run about. When they begin to peck, they should be fed with soft food, and very small grain. Unquestionably, the best soft food is an egg beaten up with a tablespoonful of milk, and heated in the oven, or by the side of the fire, until it sets into a soft custard. Chickens fed or partially fed on this, make wonderful progress. Another point often overlooked is the time at which the chickens are fed. If they are to make large fowls they must be fed soon after daylight; if, as is too often the case, they are left hungry for three hours in the morning, they are always stunted in their growth. They must be fed the first thing, and, whilst they are young, every two or three hours during the day. A large lump of soft food, such as oat, or barley meal, mixed with milk or water, is often put in the hen's coop, and it is thought that it will suffice for the day: in a short time it becomes trodden on and defiled, and it is then no longer wholesome food. The right plan is to give no more soft food, than the chickens can eat at once. Over night a supply of grits, ground oats, or small wheat may be put down to serve as the first meal in the morning. Many poultry keepers are partial to keeping the hens with the chickens under coops for some weeks. I am decidedly opposed to the plan. By so doing the natural insect food that the hen acquires by scratching—the worms, grubs, small seeds, and flies, &c.—are denied to the chicken, and no artificial diet will compensate for the loss. Nor can the hen dust, to free herself from vermin that feed sumptuously on the young chicks at night. It is said that the hen, if not cooped, will draggle the chickens through the wet grass and tire them out. A half-starved hen may possibly do so; but if she is well fed with corn, there is no danger of her so doing. If preferred, she can be shut up until the dew is off the grass; but the finest and heaviest chickens I have ever bred, have been those that have been with hens that were never shut up in houses or coops, but, being under open sheds, could go out at all hours. If the hens are allowed to scratch for the chickens, the chopped meat and meat broth, which are requisite for them when closely confined, is altogether unnecessary. It is the custom of some game

rearers to hang up in the woods any dead waste animals to supply maggots for the young pheasants. This is not desirable near a homestead; but any refuse animal remains may be utilized without offence by allowing them to become thoroughly fly-blown, and then burying them in the fowl-run; the maggots attain their full size underground, and previous to turning into flies, work their way instinctively to the surface, furnishing an abundant supply to the young chickens.

THOROUGHbred FOWLS.—So many persons well informed on general subjects are at a loss to know the meaning of *thoroughbred*, that it may be proper at this time to give some explanation, so that those who for the first time are about to breed fowls may understand what a thoroughbred fowl is.

Every animal as it grows up tends to develop in a particular way like its parents or ancestors near or remote, or like the average of its ancestry; but circumstances during development crowd it this or that way every instant of its existence, so that it has many obstacles to prevent an exact copy of its ancestors—the weather, diet and many other influences more or less remote tend to this result. No domestic animals have ever yet been bred strictly true in color, size, form, &c., yet where they breed nearly true they are called “bred true.” When they really are not perfectly thoroughbred, offspring tend to resemble the average of their ancestors; the more even the ancestor, the stronger the influence over the offspring; so that in the breeding of fowls, we desire to breed to produce the form, color, size by care in selections for generations. Selecting with these three objects in view, discarding all but the best types, we eventually produce fowls that will in a large degree produce form, size, color. We then have thoroughbred fowls as far as these three qualities are concerned. We may add other points if we desire and when we have these points established in such a manner that the offspring will be a true fac-simile of the parent, these points will be thoroughbred, having with great care obtained the several points of excellence desired. We must not forget that continued care and study are necessary to retain these points, there being so many circumstances that tend to weaken the ancestral influence. The progressive breeder continues to breed from his *perfect* birds only each generation, and by so doing he retains the ancestral influence with more strength and certainty and more full development; hence the true honest breeder of thoroughbreds becomes identified with his thoroughbred of whatever variety and these are known as his “strain” of blood.

In fowls as in other domestics there are humbug breeders who have no established strain. But there are many who are not humbugs that have not obtained a high degree of excellence. Many of them from want of study or care, fail to establish the desired points, hence the oft-repeated assertion that high priced fowls are all “fancy.” Many who undertake the raising of fowls do not give to it the time and attention necessary, hence the result is failure and the blame is charged to the fowl. In a future article I will give descriptions of the different varieties and also some statistics as to products.—*Exchange*.

Household Department.

POST UP YOUR WIFE.—Keep them posted, duly, promptly, cheerfully. Impart to them all the light you can. Do you, husbands, post them up on subjects of importance; interests and reform; collect facts, passing events, things interesting, profitable, edifying; things moral, intellectual and political? Sensible, intelligent, virtuous wives highly appreciate this, especially those pressed with domestic cares and duties, who have very little time for extended reading and investigations. Some husbands are very remiss in this benevolence; others, we are pleased to say, are happily communicative, take special pains and delight in posting their wives and children, in imparting life and information. At the table, during meal-times and on every suitable occasion, they open their minds freely, cheerfully, give a condensed, succinct, bird's-eye view of all their book and paper readings and all the interesting and important facts, gathered variously daily, weekly, monthly.

Thus wives and all present are cheered, gratified, benefitted, enabled also to impart the information to others; this generous impartation of things profitable, interesting and edifying, produces a salutary effect on the minds and hearts of the husband, deepening and riveting virtuous principles and important facts. "He that watereth shall be watered also himself." Husbands, do you think of this? Will you think of it? This method also produces sociability and companionship between husbands and wives most pleasantly, hopefully and profitably, which would otherwise be lost.—*Golden Rule.*

HOUSEKEEPING HINTS.—A bit of glue dissolved in skimmed milk and water will restore old cr pe.

Strong ley put in hard water will make it as soft as rain water; a piece of borax will have the same effect.

A wad of cobwebs will, it is said, immediately stop the flow of blood if bound on a freshly cut wound.

Ink spots on floors can be extracted by scouring with sand wet in oil of vitrol and water. When the ink is removed rinse with strong pearlash water.

A good article of prepared glue, so useful to have about every house, may be made with gum arabic dissolved in strong vinegar. It will keep in good condition a long time if kept closely corked.

A cement of great adhesive quality, particularly serviceable in attaching the brass mountings on glass lamps, may be prepared by boiling three parts of resin with one part of caustic soda and five parts of water, thus making a kind of soap which is mixed with one-half its weight of plaster of paris.

PASTE FOR WALL PAPER.—In pasting wall papers, posters, etc., especially where successive layers are put on, there arises a most dis-

agreeable effluvium, which is particularly noticeable in damp weather. The cause of this is the decomposition of the paste. In close rooms it is very unwholesome, and often the cause of disease. In large manufactories, where quantities of paste are used, it becomes sour and offensive. Glue, also, has a very disagreeable odor. If, when making paste or glue, a small quantity of carbolic acid is added, it will keep sweet and free from offensive smells. A few drops added to ink or mucilage prevent mold. In whitewashing the cellar and dairy, if an ounce of carbolic acid is added to each gallon of wash, it will prevent mold and the disagreeable taints often perceived in meat and milk from damp apartments. Another great advantage in the use of carbolic acid in paste for wall paper and in whitewash, is, that it will drive away cock-roaches and other insect pests. The cheapest and best form of carbolic acid is in crystals, which dissolve in water or liquify at an excess of temperature.—*American Homestead*.

LIME WATER FOR WASP STINGS.—Dr. Danverne writes to a French journal that some time ago he was stung on the head and face by a number of wasps. The pain was great, and he had no ammonia at hand, nor was there a druggist near by. Recollecting the fact that lime water was good for burns, it occurred to him to try it for the relief of the burning sensation produced by the stings. It answered the purpose perfectly, and he has since advised its use in some twenty cases of wasp stings, and it has always caused an instant cessation of the pain. The remedy is a simple one, and worth "making a note of."

TO MAKE GOOD BUCKWHEAT CAKES.—To one pint of sour milk or buttermilk add one teaspoon of soda, two eggs, salt to taste, and enough buckwheat flour to make a batter; bake at once. This recipe will hardly fail to give satisfaction if fairly tried.

BUTTERMILK CUSTARD.—One cup of sugar, one cup of molasses, one cup of buttermilk, one cup of flour, two-thirds cup of butter, one half teaspoon of soda, a little salt. Bake with one crust.

SNOW PUDDING.—Pour one pint of boiling water on half a box of gelatine, add the juice of one lemon and two cups of sugar. When nearly cold strain; add the whites of three eggs, beaten to a froth; then beat the whole well together and put in a glass dish. Take the yolks of the three eggs, one pint of sweet milk, one teaspoon corn starch, flavor with vanilla, and cook as soft custard, then pour round the jellied part.

JELLY ROLLS.—Two cups of powdered sugar, two-thirds cup of butter, six eggs, well beaten, one teaspoon soda, two teaspoons cream tartar, one cup sweet milk, two cups flour. Bake in long tins, spread each cake with jelly, and roll while hot.

CREAM CAKE.—One cup of butter, one cup of cream, two cups of sugar, three cups of flour, four eggs, one teaspoon soda, two of cream tartar. Mix as you would pound cake, and bake in shallow tins.

Correspondence.

[For the Southern Planter and Farmer.]

APRIL NUMBER OF THE SOUTHERN PLANTER AND FARMER.

The first article in the April number of the journal, "The Duty of the Hour," bears on the much mooted subject of the "Granges." If it is, as stated, that "after all the great object to be secured by the Patrons of Husbandry is the bringing together of the farmers in clubs for the discussion of agricultural and social questions and the mutual improvement thereby secured to all," then why may not the object be as well secured by the ordinary "Farmers' Clubs" now in existence? And why may not these clubs experiment with the "various fertilizers" as well as the granges? And another thing, why may not the clubs secure co-operation in buying and selling, which appears to us, one of the greatest benefits which the Granges promise to secure to the farmers?

"Notes for the Month," as usual, practical and sensible. While believing that "50 bus. ashes or 200 lbs. *potash salts*" will very much benefit the oat crop, we are not prepared to admit "they will double the crop on ordinary soils."

The advice for using the subsoil plow after the turning plow in preparation of the land for "corn" is good. The difficulty in the way usually is that the farmer rarely has an extra team for this purpose, for in our experience, it requires a double team to work the subsoil plow successfully, and particularly to keep with the turning plow. If this cannot be accomplished at the time of breaking up the land, then we advise that the subsoil plow or coulter, be run close to the corn in the first working, using one horse one-half the day, and then another in the other half, as the labor is too much for one horse the whole day.

The preparation advised for manuring corn in the hill is a good one; but where are we to get one of the constituents in sufficient quantity?—viz.: hen manure. In advising the use of plaster on clover, the writer should remember that on a great deal of land in Eastern Virginia, (below the Piedmont region) that plaster does not "act," and is thrown away.

The writer on "Commercial Fertilizers," believes they do not pay, and we believe he is about right.

The proceedings of the "Tuckahoe Farmers' Club" are interesting. We were present at the meeting, but did not understand in reference to "gas house lime," that the club were not inclined to favor it as a fertilizer. Mr. Warren, we think, confessed that his experience with it was limited. Dr. Pollard did not agree with Dr. Crenshaw in advising against its use on the growing plant of any kind in the spring; but, stated he had dragged it in with oats at the rate of nearly 100 bus. to the acre, and along with clover, with the best results on the oats and clover; the latter being one of the very best first crops of clover to be met with. He also alluded to Mr. E. B. Cook's use of it, dragged in along with wheat, producing most excellent results; the wheat being nearly a foot taller where it was used than where it was not.

Dr. Perkins preferred the use of the ordinary lime to the "gas lime," because we know what we are using in the former, but not in the latter case. But analysis has proved to us what gas lime contains and what we are using.

Next follow interesting proceedings of two more Farmers' Clubs. The members of the "Rappahannock Club" seem to believe the use of chopped or ground feed does not pay. In this, we agree with them. Particularly, we do not believe in cutting up feed and wetting it, except shucks, which should be wetted twelve hours before feeding.

In the "Farmers' Remedy for hard Times," the writer says, "to cut all the forage for a large stock; it is doubtful whether the efficient labor of a farm can be spared, unless in bad weather.

The writer of "Sowing Grass" believes that in this latitude, grass succeeds best sown alone, and that wheat and oats are no protection to it against the heat and sun. He gives some very good reasons and experiments for his position. We had always been disposed to think the stubble of wheat and oats, particularly if not cut too low, was a protection.

Mr. Price's article on "Fruit Culture" comes next, and is very practical and good, as far it goes, but there is not enough of it. He should, particularly, have pointed out the fruits best suited for this latitude. This is a subject in which all fruit-growers are interested, and one not well understood. What, with the love of worthless and free introduction of new varieties by the nurserymen and their laudation of them, fruit-growers have been induced to plant out very many worthless kinds. This involves both loss of time and loss of ground in establishing profitable orchards. It is a matter we feel disposed to discuss if we have time, in a separate and well considered article.

In regard to Mr Price's remedy for "pear blight," it is evident he has not encountered that fatal variety of the disease, where "death begins at the centre." In such instances, to "use the knife freely," will do about as much good as for the surgeon to amputate the limb of a mortified patient, or a patient where disease is invading the vital centres, the head, the lungs, or the heart.

This disease, so much dreaded by the cultivators of the pear, was particularly fatal the past season, killing in some orchards in the vicinity of Richmond, as many as 200 trees out of 1,000, or 20 per cent. We have reason to dread a recurrence of it the present year, and we design trying the remedy (lime and sulphur) said to have been found effectual in the "experimental gardens" at Washington.

An article commending the "Essex Hog," states they attain the same weight as the Berkshires at twelve months. We supposed the latter would outweigh the former at any age, with the same treatment. They are a large hog, and for that reason partly we have had a preference for the Berkshire, thinking the Essex rather small.

We have, in this number, another very sensible article from Mr. Hill Carter, advising the farmers "to make less grain and more grass, and raise stock, cattle, sheep, hogs, mules, fowls, fruit, and live more economically." Good counsel.

There are other articles worthy of notice in the number, but for fear of being tiresome, we close. REVIEWER.

ERRATUM IN THE REVIEW OF THE MARCH NUMBER.—In the notice of the article on "Liquid Manures," (p. 194) for "convert it into humors," read "convert it into *humus*."

[For the Southern Planter and Farmer.]

Your April number is quite rich with the doings in your State of the Patrons of Husbandry. I am glad that Virginia is alive to this great move. You mention in your editorial that you are constantly in receipt of letters inquiring the aims and purposes of the Grange movement, and the means they intend to adopt to secure those aims. I can enlighten those enquirers without any violation of pledge or good faith, and I take pleasure in doing so.

Our aims are: *Personal and National prosperity*. There is no harm in this, I am sure. If I can, by uniting with my friends, insure to myself greater prosperity, why not do so? But can this be done?

I will only name a few instances occurring in the Grange over which I have the honor to preside, and a neighboring Grange, and these are only two or three out of many such that I know of.

A few gentlemen in the Grange I refer to, wished to purchase fertilizers. They made application to the agent of the particular manure they wanted, and he asked them fifty-five (\$55) dollars cash per ton, or sixty-five (\$65) payable 1st November. This Grange appointed a committee and sent them to the agent and arranged for seventy five tons at forty-eight (48) dollars cash, or fourteen (14) per cent. per annum, interest added, on the responsibility of the Grange Seal. Here was seven dollars per ton saved; over five hundred dollars in one article in one neighborhood.

In my own Grange the same thing occurred as to manures, and also in the article of coffee. We could not buy coffee for less than thirty-eight cents per pound, cash, some weeks ago in this country, and we clubbed together and sent an order to New York to a *Grange House*, and obtained it at twenty-six, (26,) I think. (I have not the bill by me.) Certainly not exceeding twenty-eight.

Our aims, then, are to cheapen every thing, from a pin up, and ultimately to cheapen the carrying trade and labor too. These are a part of our aims, and the means we intend to adopt to secure those aims can be stated in two words: Patience—Perseverance.

There is no antagonism in our Order to good government, either domestic, State or National, it is simply a combination to stop extortion and imposition, and to cultivate economy and a more intimate social relation between neighbors engaged in the same business. I give you, therefore, briefly, our aims and the means we intend to adopt to accomplish them.

I am not surprised that politicians should dread the Grangers, especially the corrupt ones, but I cannot see why the merchants should feel unkindly to us. Merchants are indispensable, and I for one, and so will the Order, ever patronize them, but they must lessen profits, and bankers and money-lenders must lessen interest. And we intend to have it so, for when we make what we need at

home, we shall have no occasion to buy, and if I buy nothing, I need no money, and if the people need no money, interest will be low. It will take time to accomplish this, hence I say, patience and perseverance are the levers to accomplish this great work.

The increase of the Order is marvellous. Two months ago there were 395 Granges in Georgia, they number to-day 544, an increase in sixty days of one hundred and forty-nine.

I see that "Reviewer," in the April number, gives you a rap over the knuckles for typographical errors. I am glad of it. The same writer makes a thrust (a faint one, it is true,) at the Grangers on account of their secret feature, and the introduction of "our wives" into the Order. That is the surest guarantee of the purity of the Order. Let me entreat "Reviewer" to take his lady and daughters and try the Grangers.

Permit me to give a word of counsel to all persons who propose to form a Grange. Select for your officers the best men you have. Gentlemen, who not only have good standing socially, but who are good business men and *read well*. Especially should this be the case with the Master and Chaplain. Your Secretary and Treasurer should be tried men. Guard your Seal. Begin right. Do all your work accordingly to the law, *rigidly*, without regard to consequences, it will save you much trouble.

S. WYATT, *W. M. County Line Grange.*

FOREST HALL, P. O., *Burke Co., Ga.*

[For the Southern Planter and Farmer.]

YOUR REVIEWER.

The Patrons who read your paper must feel greatly edified at the covert attacks of your "Reviewer," who "*hoping and believing* this movement will do good," yet "cannot see the necessity of a secret order, or of bringing into the public arena the wives of the farmers." Well, suppose he can't see the necessity of a secret order, if others think they see the necessity what is it to "Reviewer"? The people have tried time and again clubs, societies, &c., yet they have essentially failed to unite the country. While exerting to some extent a beneficial influence on the agricultural interests, they cannot of necessity bind together and cement the whole body of farmers in a permanent organization. The Patrons of Husbandry can bring them together. No better evidence could be desired than the fact, that more granges have been organized in Virginia since the first day of January than there have been clubs in ten years. Whether it will unite them permanently remains to be seen. If farmers are fools, as some seem to think, then its existence will be ephemeral, but if they are wise and prudent, then a noble structure may be erected which will be as enduring as any human institution can be.

In reference to farmers' wives being brought into the public arena: the remark, taken in connection with his previous allusion to it as a secret order, seems to be somewhat paradoxical. The Grange, one would suppose, is anything but a public arena. But let it be so; who has the right to say that the farmer shall not take his wife wherever he

pleases? It is none of the business of "Reviewer" or anybody else where I carry my wife, so long as *he* is not forced to carry Mrs. Reviewer with him into the "public arena," or even go himself.

"Reviewer," speaking of the woman and secrecy questions, says it "is not in accordance with the taste of the Southern people." Take reviewers generally they are Solomons, in their own conceit, knowing a great deal about every conceivable subject. But our "Reviewer," like the celebrated Rip Van Winkle, has been evidently asleep for some time. There is no danger of transcending the truth in asserting that there are largely more than 150,000 members of the order in the Southern States, composed of the very best men and women in society, showing conclusively that both Woman and Secrecy, the great bulwarks of the Order, are in accordance with their tastes.

If "Reviewer" really believes, as he says he does, that the Grange movement will do good, it would be far more consistent with that belief if he would put his shoulder to the wheel and assist in the effort, than to excite the prejudice of those who like himself do not and cannot know what the intrinsic merits of the institution are.

Will "Reviewer" be kind enough to tell us why women should not be admitted to membership and why the Order of Patrons of Husbandry should not be secret?

HENRICO.

[For the Southern Planter and Farmer.

APRIL 20th, 1874.

We have now fourteen Granges in the county of Augusta, composed of the best and most influential farmers. There are many now on the eve of organization. The Order is spreading rapidly and the farmers take hold of it with that zeal and determination which mark the character of that class of people, and their works will follow them. We find here too, the iron sinews of remorseless monopoly and consolidated capital arrayed against the wasting tissues of individual and unorganized labor. We have long held our hands upon our mouths and our mouths in the dust; but the chain which bound us to the past is broken, and the events of the future will speak with a cogency which no human logic can refute, and with an eloquence which no human tongue can equal.

The Patrons of Augusta are about forming a County Grange. We shall soon begin the work of organization in the counties of Bath and Highland. The spirit of right and reform is moving amongst those honest sons of toil, and we predict the Order will grow and propagate with the health and vigor that exists with those people.

The History of the Order of Patrons of Husbandry moves in its rapid work in common with all genuine history under the influence of two generic ideas: The conservative (not political) which desires to secure all the good of the present by fidelity to its results in the past, and the progressive which looks out in hope to a better future. Reformation is the great harmonizer of these two principles. Sober judgment and sober means characterize the conservatism of this Order.

The agricultural classes suffer and always have suffered from

the rapacity of aggregated and centralized capital. The Order means business, and will labor to bring the greatest good to the greatest number, by mutual instruction and the lightening of labor; by diffusing a better knowledge of its aims; by bringing nearer together the producer and consumer; by mutual protection to husbandmen against sharpers and middle men.

The wheat crop is growing rapidly, and looks very well. The harvest will be advanced this season. G. W. K.

[For the Southern Planter and Farmer.]

Please insert in your valuable paper the following Granges organized by me since April 1st:

Melrose Grange, near Warrenton Junction, Fauquier county, April 4th. Geo W. Meetze, Master; J. W. Mann, Secretary. Eleven males and ten females.

Jefferson Grange, Hillsboro, Albemarle county, April 7th. Wm. H. Lipscomb, Master; W. T. Rea, Secretary. Sixteen males and four females.

Rapid Ann Grange, Somerset, Orange county, April 17th. Col. N. J. Hinkle, Master; Strother Newman, Secretary. Twenty male and nine females.

There is considerable inquiry throughout the Piedmont district at present, for information in regard to the organization of Patrons of Husbandry. In less than twelve months, I believe four-fifths of the farmers in this district will belong to the Grange.

You will please send me a few copies of the SOUTHERN PLANTER AND FARMER, as in almost every section they desire to make up a club for it.

We have had so much rain during this month the farmers are very much behind with planting corn. Scarcely any planted yet, and at present, the land is as full of water as it can be, and will be sometime before it will be in condition to plant.

WM. McCOMB,

APRIL 18th, 1874.

BOOK NOTICES.

The veteran seedsman and florist, Peter Henderson, has sent us a copy of the edition of his work on "Practical Floriculture." The first edition of 20,000 having been long since exhausted. Mr. Henderson is eminently a practical writer, and the pages of his book reflect his own experience of many years. He dissolves the mystery that has hung around green house and general flora culture, and gives his readers plain and simple directions for the cultivation of flowers. He has now written two books: "Practical Floriculture" and "Gardening for Profit," which, if it does no more, will entitle him to the thanks of the American people, for they

contain more simple, plain, practical information than all the other books on the subject we have ever seen. The book bears the imprint of Orange, Judd & Co. Is gotten up in good style, well illustrated. Price \$1.20.

Hubbard Bros., Philadelphia, have sent us one of their popular subscription books. The title: "*Ocean's Story*," is a comprehensive one, and we find in it descriptions of maritime adventures, achievements, explorations, discoveries and inventions. A history of the rise and progress of navigation and ship building, with detailed accounts of many remarkable voyages, including those of Magellan, Columbus, Capt. Kidd, Capt. Cook, and others. Also descriptions of diving and deep sea navigation. The author is Frank B. Goodrich. It contains over two hundred handsome illustrations, and is printed on excellent paper, making altogether a handsome book of over seven hundred pages. Book agents, we should think, would do well with this book.

Introduction to Roman Law.—By James Hadley, L. L. D., late Prof. of Greek literature at Yale college. Published by D. Appleton & Co., New York.

One of the great wants of the schools has been a plain, concise and correct treatise on the Civil Law. Without making any very great pretensions, this little book meets this want. It is simply the printed report of twelve lectures on the Roman or Civil Law, repeated several times before the senior class of under graduates at Yale college. We have derived great pleasure from the brief sketch we have been able to give them, and we are confident that a careful perusal of this book will give a very clear insight into this subject, hitherto much shrouded in darkness. The book is decidedly interesting to any one of enquiring mind, and will be particularly valuable to students of law and history. It is neatly gotten up by D. Appleton & Co., and will meet with ready sale.

Harper & Bro. have placed us under obligations for their publications, the *Weekly*, the *Bazar* and the *Monthly Magazine*. All bearing the name of Harper's are always welcome to our fireside and come filled with information and amusement.

We believe in pictures, and in *The Aldine*, published by James Sutton & Co., is filled with the most beautiful we have ever seen. As an art journal, it has no equal. The April number is particularly good. The scenery of Lake George depicted is perfectly beautiful, and, indeed, the whole number is filled with the choicest specimens of art.

FARMERS' NEWS AND ITEMS.

The amount of the cotton crop of 1873, thus far marketed abroad, is 2,030,000 bales against 1,803,000 last season. The stock now in port is 701,000 against 531,000 last year.

H. R. Smith, of Springfield, Erie county, N. Y., is the sole proprietor of 11 cheese factories, which during the past year have received the milk of 4,700 cows, made 25,500 cheese weighing 1,400,000 lbs., and sold for \$185,550.

South Carolina complains that her Legislature, which has just adjourned, have appropriated \$1,798,270.55. Of this amount, \$400,971.13 was for public printing; \$365,000 for legislative expenses. Claims for furniture, &c., \$279,069.42; contingent fund, \$45,000; sundries, 52,180; salaries, \$192,200; public schools, \$300,000; asylums, \$193,850.

There seems to be a growing disposition among the farmers along the North Carolina border to engage in the culture of cotton instead of tobacco. It is claimed that it is less exhaustive to the land, and does not require such close attention, or at least does not suffer so much from neglect as tobacco.

The weather has been so wet and cold that many farmers have not finished seeding oats, and very little corn has been planted up to the 23rd of April.

Fall seeded grain, especially wheat, is looking remarkably well. The surface seeded was not large, but the prospect for a good yield is very flattering.

Seed corn soaked in a weak solution of nitrate of potash, (salt petre,) is said to send up stronger shoots, and grow more rapidly, than if soaked in pure water; the experiment is worth trying.

Corn planted 4 feet apart each way, will give about 2,500 hills per acre, allowing one stalk to a hill, one ear to each stalk, and 70 ears to a bushel, we will have some thing like 35 bushels per acre, a very fair yield for poor land. David Dickson, of Georgia, a most successful planter, says he always estimates the amount of corn his land ought to yield, and plants accordingly, near or far, to suit, never allowing more than one stalk in a hill on ordinary soils.

Tobacco is slowly advancing in price, and farmers are realizing good returns for their labor, when their crops are well prepared for market. It pays well to sort tobacco carefully, and this part of the business should only be confided to experienced and careful hands; frequently one or two hundred weight taken out of a hogshead will add very much to the aggregate sum realized for the whole.

The following recipe for killing the tobacco fly we copy from an essay, by Major Ragland, published by S. Fertilizing Company:

"Dissolve an ounce of cobalt of the shops in a pint and a half of water, and mix it with molasses, or other syrup, bottle it, and drop it through a quill into the heart of the blossom. It should be done about sundown, and the poisoned flowers pulled off next day, otherwise the plant will be destroyed. It has been found that this weed, so treated, planted around the edge of the tobacco lot, and here and there through the patch, will prevent, to a great extent, the ravages of the tobacco worm. All the planters, however, in one neighborhood must act together, and this can be arranged through the local agricultural club."

We have received from Chas. M. Stieff, of Baltimore, his illustrated catalogue and price list of Pianos, Organs, &c.

The elder Stieff, father of the gentlemen who are now in charge of this business, established an enviable reputation as the manufacturer of one of the very best Pianos in use in this country, and the sons have fully sustained and, indeed, added to and extended this reputation. They have now on hand a complete assortment of instruments varying in price according to style of finish, but all possessing that exquisite tone which characterizes the Stieff Piano. They are also agents for the Burdell Organ and other equally good instruments.

Persons desiring to purchase, and especially school teachers, will do well to send and get one of their catalogues at least before purchasing elsewhere.

VIRGINIA DEPUTIES.

The following Deputies have been appointed by the Master of the State Grange of Virginia. The list embraces the post office of the Deputies, with the Districts assigned to each. Parties organizing Granges in these Districts will apply direct to the Deputies. Where parties are organizing Granges in counties not embraced in this list, or counties where there is no Deputy, they will apply direct to J. W. White, Master of the State Grange, Eureka Mills, Va.

WM. MCCOMB, Gordonsville, Va. *District*—Albemarle, Greene and Madison.

F. W. CHILES, Tolersville, Va. *District*—Louisa, Orange, Caroline and Spotsylvania.

ADDISON BORST, Passapatanzy, Va. *District*—King George, Richmond, Westmoreland, Lancaster and Northumberland.

T. O. GRAVES, Marksville, Va. *District*—Shenandoah and Page.

A. M. MOORE, Summit Point, W. Va. *District*—Warren, Clarke and Frederick.

S. B. CARNEY, Portsmouth, Va. *District*—Princess Anne, Norfolk and Elizabeth City.

J. P. SCHERMERHORN, Richmond, Va. *District*—Henrico.

E. D. PHILLIPS, Chuckatuck, Va. *District*—Nansemond, Isle of Wight and Southampton.

W. H. BASDARN, Jarratt's Depot, Va. *District*—Surry, Sussex and Greensville.

W. B. WESTBROOK, Petersburg, Va. *District*—Dinwiddie, Prince George and Chesterfield.

J. C. FEATHERSTONE, Lynchburg, Va. *District*—Bedford, Amherst and Campbell.

J. J. WILKINSON, Laurel Grove, Va. *District*—Pittsylvania.

J. O. CHAPPELL, Mountain Roads, Va. *District*—Halifax.

S. A. WILLSON, Lexington, Va. *District*—Rockbridge.

G. W. KOINER, Fishersville, Va. *District*—Augusta, Bath, Highland and Rockingham.

E. B. GOODE, Boydton, Va. *District*—Mecklenburg and Brunswick.

D. S. WATSON, Issequanna, Va. *District*—Goochland and Fluvanna.

J. HASKINS HOBSON, Powhatan C. H., Va. *District*—Powhatan, Cumberland and Amelia.

T. T. TREDWAY, Hampden Sidney, Va. *District*—Prince Edward, Buckingham and Appomattox.

T. N. MERRILL, Keysville, Va. *District*—Charlotte and Lunenburg.

HERMITAGE NURSERIES,

Richmond, Virginia.

JOHN W. RISON,

PROPRIETOR OF

Hermitage Nurseries,

RICHMOND VIRGINIA.

1,500,000

APPLE AND PEACH TREES,

FOR SALE THIS SPRING AT REDUCED PRICES. FIRST-CLASS APPLE TREES, \$16 per hundred. FIRST-CLASS PEACH TREES, \$14 per hundred.

These Trees are warranted true to name and is strictly first-class stock.

SEED STORE AND OFFICE,

909 Main Street Richmond, Va. feb

FOR SALE,

ITALIAN BEES,

BEE HIVES, &C.

I am prepared to furnish, at short notice, Swarms of Black Bees at \$5 per swarm, Hives extra.

Swarms of Italian Bees at \$10 per swarm, Hives extra.

Italian Queens (with a few workers), by mail or express, \$5. Safe arrival guaranteed.

A cheap Movable Comb Hive without surplus boxes..... \$3 00

A better Movable Comb Hive with two surplus boxes..... 3 75

Triumph Bee Hive, Movable Comb, and upper or surplus chamber, or six surplus boxes (trade mark included to use one Hive), painted, and with feet..... 5 00

Deeds for individual rights to make and use the Triumph Hive..... 5 00

Deeds for individual rights to make and use the American side opening Hive... 5 00

Bee Vail for protecting face and head... 1 00

Cheap Honey Extractor, Virginia made... 9 00

Large Honey Extractor with cog wheels 13 00

Peabody Honey Extractor at factory prices, freight to be added..... 15 00

W. R. POLK,

Real Estate Agent and Auctioneer.

No. 7 Shaffer's Building, Tenth St., bet. Main and Bank Sts., Richmond, Va. ap-

FOR SALE.—Thoroughbred Stock, &c. I have for sale a lot of thoroughbred Devon Cattle. Essex Pigs from improved Stock. Also a lot of Light Brahma Fowls. Persons ordering from me can rely upon getting as good stock as any in the State. My herd of Devon are of the most improved breed. I took five 1st premiums on a portion of them at our last Virginia Fair. For further particulars address,

F. W. CHILES,
feb-6m Mansfields, Louisa Co., Va.

Cranberry Plants

FOR SALE.

\$4 per 1,000. \$12 per bbl.
Apply to

EDITORS PLANTER & FARMER.

EDW. J. EVANS & CO.,

Nurserymen and Seedsmen,
York, Penn.

A complete stock of Fruit and Ornamental Trees, Garden and Flower Seeds, Seed Wheat, Seed Oats, Seed Corn, Seed Potatoes, Grass Seeds, &c. Send for Catalogue and price lists. feb-10t

SOLUBLE SEA ISLAND GUANO.

—O—

Reduction of Price to \$55 Per Ton, Cash.

—O—

With a view of meeting the necessity of the Planters at large, under the present depression of agricultural interests, the proprietors, (R. W. L. RASIN & Co.,) of this valuable and well tried fertilizer, have promptly yielded to my appeal, by reducing the price from \$58½ to \$55 per ton, cash.

The accompanying circular affords (from the many favorable testimonials given by my own customers) the best proofs of the superior worth of the SOLUBLE SEA ISLAND GUANO.

JOHN BOOKER, Agent,
1810 Cary street, Richmond, Va.

P. S.—I am the Agent also for the HOLSTON SPECIAL FERTILIZER. Price \$9, at Saltville. ap-2m

PIEDMONT AIR-LINE RAILWAY.

Richmond and Danville, Richmond and Danville R. W., N. C.
Division, and North Western N. C. R. W.

CONDENSED TIME TABLE.

In effect on and after Sunday, October 12th, 1873.

GOING NORTH.			GOING SOUTH		
STATIONS.	MAIL.	EXPRESS.	STATIONS.	MAIL.	EXPRESS.
Leave Charlotte,	10.00 P. M.	8.15 A. M.	Leave Richmond,	1.28 P. M.	5.00 A. M.
" Air-Line Junction,	10.06 " "	8.30 " "	" Burkville,	4.45 " "	8.29 " "
" Salisbury,	10.06 A. M.	10.21 " "	" Danville,	9.18 " "	12.48 P. M.
" Greensboro,	3.30 " "	12.45 P. M.	" Greensboro,'	12.20 A. M.	3.50 " "
" Danville,	6.20 " "	3.12 " "	" Salisbury,	2.35 " "	6.06 " "
" Burkville,	11.35 " "	7.36 " "	" Air-Line Junction,	4.29 " "	8.10 " "
Arrive at Richmond,	2.17 P. M.	10.17 " "	Arrive at Charlotte,	4.35 " "	8.15 " "
GOING EAST.			GOING WEST.		
STATIONS.	Read down.	MAIL.	Read up.	MAIL.	
Leave Greensboro'		3.50 A. M.		12.20 A. M.	
" Co. Shops,		4.45 " "		9.35 " "	
" Raleigh,		8.05 " "		5.26 " "	
Arrive at Goldsboro,'		11.15 " "	Leave	2.30 P. M.	

NORTH WESTERN N. C. R. R.

SALEM BRANCH.

Leave Greensboro, 4.30 P. M.; arrive at Salem 6.25 P. M.; leave Salem 8 A. M.; arrive at Greensboro' 10.00 A. M.

Mail trains daily, both ways.

On Sundays, Lynchburg Accommodation leave Richmond at 9.45 A. M.; arrive at Burkville 12.45 P. M., leave Burkville 5.35 A. M., arrive at Richmond 8.45 A. M.

Pullman Palace Cars on all night trains between Charlotte and Richmond (without charge).

Papers that have arrangements to advertise the schedule of this Company will please print as above.

For further information, address

S. E. ALLEN,
General Ticket Agent, Greensboro' N. C.

T. M. R. TALCOTT, Eng'r & Gen'l Sup't.

nov-14

WM. C. WILSON'S DESCRIPTIVE CATALOGUE for 1874 of Choice Greenhouse and Bedding Plants, Evergreens, Fruit Trees, etc., will be mailed to all applicants.

WM. C. WILSON,
P. O. Box 98, Astoria, L. I.
CITY OFFICE—43 W. 14th St., N. Y. ap—

MAGNOLIA NURSERY,

(BROOK TURNPIKE, NEAR CITY,) **RICHMOND, VA.**

For sale, a large assortment of Shade and Ornamental Trees, Evergreens, Flowering Shrubs, Creepers, &c.; also Grapevines and other small Fruits, Roses, etc., etc. Price-list furnished on application in person or through post-office

L. J. HARVEY,

Nursery grounds open to the inspection of visitors during business hours

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W. C. SMITH,

MANUFACTURER OF AND DEALER IN

CHILDREN'S CARRIAGES,
CHINA GLASS AND WILLOW WARE,
TOYS OF EVERY DESCRIPTION, AFGHANS,
MATS, &c.

Invalid Chairs made to order, also repairing neatly done. Salesrooms 412 Broad Street, and 737 Main Street, Factory 308, 312 and 314 Fifth Street, Richmond, Va. Ap-12m.

AUCTION SALE OF THE

MUIRKIRK HERD.

The Subscriber has been retained by Mr. CHARLES E. COFFIN, MUIRKIRK, Prince George County, Md., to sell his entire herd of Short-Horns,

ON WEDNESDAY, 13th DAY OF MAY NEXT.

Mr. COFFIN founded his herd with animals either direct or strongly in-bred to Bates, Booth, Princess, Gwynnes and other good strains, imported and home bred. Having a personal knowledge of the H. rd, I can recommend them to all gentlemen wishing good individuals well bred. The bulls last in use are imported ROYAL BRITON and LORE ABRAHAM, Booths; LORD MATOR of the Princess tribe, and the extra good BATES' BULL 6TH EARL OF OXFORD

Muirkirk is a station on the Baltimore and Ohio Railroad, 15 miles from Washington, D. C. Three trains each way in the morning.

TERMS.—Cash on sums under \$20. Over \$200, approved paper at 6 per cent, or a discount for cash of 5 per cent. No postponement, no reserve. Residence 200 feet from railroad.

Catalogues ready early in April, for which address owner or Salesman.

JOHN R. PAGE,
Sennett, Cayuga Co., N. Y.

The SALE of C. C. PARKS, Esq., Wankegan, Ill., occurs on Wednesday, May 20th. COLKING'S Sale, at Dexter Park, Chicago, on Thursday, May 21. ap-2t

L. POWERS & SON,

COMMISSION MERCHANTS,

AND

WHOLESALE PRODUCE DEALERS.

1540 East Main Street, Richmond, Va.,

Flour, Grain, Hay, and all kinds Seed and Eating Potatoes. Foreign and domestic Fruits. Seed Potatoes a specialty.

ZELL'S ENCYCLOPEDIA.

IT IS A DICTIONARY OF LANGUAGE. It contains every word in the English language, with its derivation and definition.

IT IS A BIOGRAPHICAL DICTIONARY. It has a sketch of every noted person of all ages, many of them with portraits.

IT IS A COMPLETE GAZETTEER. It has a description of every country, sea, lake, river, mountain, town, &c., in the world.

IT IS A MEDICAL DICTIONARY. It contains a description of diseases, remedies, instruments, surgical operations, &c., &c.

IT IS A HISTORY OF THE WORLD. It contains a description of the migration of races, the progress of nations, their customs, laws, religions, &c.

IT IS A COMPLETE NATURAL HISTORY. It describes all animals, birds, insects, fishes and reptiles.

IT IS A COMPLETE WORK ON BOTANY. It describes every plant, flower, vegetable and tree, with their properties, uses, &c.

IT IS A COMPLETE WORK ON MECHANICS. It describes all new inventions, engines, machinery, tools, &c.

IT IS A COMPLETE CHURCH HISTORY. It describes impartially the various divisions of the church of all ages.

IT IS EQUAL TO A WHOLE LIBRARY OF WORKS. It describes every material or non-material thing that is capable of description in language.

IT IS WELL ILLUSTRATED. It contains nearly three thousand engravings of persons, animals, plants, trees, flowers, machines, buildings, &c.

A specimen number, containing forty pages, will be sent to any address on the receipt of 10 cents. Sold only by subscription. Agents and canvassers wanted

All communications respecting agencies and subscriptions should be addressed to

AARON JONES, Jr.,
General Agent for Virginia,
1115 Main Street, Richmond.

ap—

B. F. LEWIS, GWYNEDD, Montgomery Co., Pa., Importer, Breeder and Dealer in fine Fowls, Pigeons, Pets, etc., of the purest and best quality. Berkshire and Chester White Pigs. Large Bronze and White Holland Turkeys. Rouen, Aylesbury, and other fine Ducks. China, Bremen, and other Geese. Asiatics, Spanish, Dorkings, Hamburgs, White and Brown Leghorns, Polands, Houdans, and several varieties of Bantams; also Eggs for Hatching in season. Greyhounds, Newfoundland, and Hunting Dogs. Black and White, French, and Blue Maltese Cats, also many other specimens of rare Fowls, Pigeons, Rabbits, and other Pets. My Stock has been awarded 190 Premiums in five months. I would also call the attention of Breeders to my celebrated Chicken Powder, which will cure as well as prevent Cholera, and other diseases in Fowls, as well as promote their health and vigor. Sold at 50 cts. per pound. A liberal discount to the trade. Every one should try it. For Catalogue and Price-List, address with stamp. ap.tf

THE CROTON GRAPE.

Fine two-year old Plants of this variety by mail or express. Send for Price-List.

S. W. UNDERHILL,

ap— Croton Landing, P. O., N. Y.

JOHN LAIRD, FLORIST,

Grace St., Gardens and 733 Main Street, Cor. Eighth St.

Offers to the Public a Large and fine Assortment of

Greenhouse and Hardy Plants,

AND ORNAMENTAL TREES.

Flowering Shrubs, Flower Seeds and Grape Vines in great variety, at reduced rates. All orders delivered in City free of charge. Packing and Shipping carefully attended to.

Catalogue on application.

ap-2t

FOR TOBACCO AND ALL SPRING CROPS

USE

BAUGH'S

RAW BONE

TRADE MARK

SUPER-PHOSPHATE.

Quality highly improved, and
super. Rich in ammonia and
dially adapted to spring crops.
GROUND BONES, PURE
ZINC SUPPLIES.



standard warranted to every
soluble phosphoric acid, espe-
and top-dressing—also, PURE
BONE MEAL, and FERTIL-
BAUGH & SONS.

No. 20 S. Delaware Ave., Philadelphia,

And No. 103 South St., Baltimore.

mar-3mo:

EGGS FOR HATCHING.

I will now receive orders for EGGS from the following BREEDS OF POULTRY.

EGGS to be shipped in

MARCH, APRIL AND MAY.

LIGHT BRAHMA,	\$2 per dozen.
DARK BRAHMA,	2 " "
PARTRIDGE COCHIN,	3 " "
BROWN LEGHORN,	4 " "
HOUDAN,	3 " "
ROUEN DUCKS,	3 " "
SILVER SPANGLE HAMBURGS,	3 " "

Cash to accompany order. Eggs delivered in rotation, commencing with 1st of March.

T. L. PAYNE.

ap-1f

S. P. and Farmer, Richmond, Va.

TO THOSE INTERESTED IN THE PROPAGATION OF GAME FOWLS.

We have at Mount Erin the following described Game Fowls, to wit: The IRISH RED, BALTIMORE MUFFS, and GEORGIA DOMINICKE—all of them tried Fowls in the pit, and known to be Genuine Game, which we offer for sale at the price of FIVE DOLLARS a pair. Any friend desiring to propagate from such stock, who will send their orders enclosing \$5 to Publishers of SOUTHERN PLANTER AND FARMER, No. 1115 Main Street, Richmond, will be promptly attended to.

nov—6m

JAMES DUKE,
MOUNT ERIN, Henrico County, Va.

FOR SALE.

A VERY FINE

BERKSHIRE BOAR,

NINE MONTHS OLD, SIRE AND DAM
IMPORTED FROM ENGLAND.

A few Superior SOUTH DOWN EWES and EWE LAMBS, and a very large

BBONZE TURKEY GOBLER.

PRICE OF TURKEY \$5.

A. M. BOWMAN, Bellevue Stock Farm,
WAYNESBORO, AUGUSTA Co., VA.

jan—tf

PHOTOGRAPHS.

We have purchased the Photographic Gallery formerly owned by Mr. W. G. R. FRAYSER, 1011 Main St., opposite Post-office.

Having thoroughly refitted and added all the recent improvements, we respectfully inform the public that we are prepared to execute every first-class style of PICTURES (from miniature to life-size) known to the art. Our establishment is the most extensive and perfectly appointed one in the South, consequently we are enabled to offer our patrons superior facilities for obtaining the very best results that the Art is susceptible of. We retouch elegantly all negatives made in OUR GALLERY. Our facilities for copying and restoring old Pictures are not equalled by any establishment in the country. Persons desiring first class work, in our line, will find it to their advantage to call and examine our artistic productions. You will find our prices as reasonable as first-class work can be produced.

[nov—ly]

M. J. POWERS & CO.



35 Packages of Flower or Vegetable Seeds free by mail for one dollar. One beautiful Illustrated Catalogue of seeds and plants for 1874, free to all. Plants by mail specialty. Address,

GREEN, BEACH & CO.,
Seedsmen and Florists, Oil City, Pa.
Box 1775. mar—10t

THE NEW CLIFTON FRUIT CRATE and VEGETABLE CRATE the best thing known for transporting Fruits and Vegetables. Will supersede all other articles used for these purposes. Took first premium and diploma at Maryland State Fair, 1873. First Premium and Diploma at Frederick Fair, 1873. First Premium or Medal at Virginia State Fair, 1873.

State, County, Farm, and Individal Rights for sale by

nov—ly

E. B. GEORGIA & CO.,
Clifton, Fairfax Co., Va.

SEEDS! BULBS! PLANTS!

VEGETABLE AND FLOWER SEEDS, LILIES, GIADIOLUS, TUBEROSES,

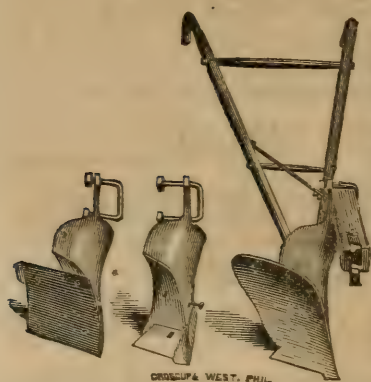
And all other Summer Flowering Bulbs. **ROSES.** Greenhouse and Bedding Plants. Every requisite for the **VEGETABLE GARDENS, FLOWER GARDENS, GREENHOUSE and WINDOW GARDENS.** Catalogues sent free to all applicants.

W. S. ALLEN,
Seed, Bulb and Plant Merchant,
QUEENS, N. Y.

feb—3m

THE WATT PLOW

CONTINUES TRIUMPHANT!



CORLIFF & WEST, PHIL.

No **CHOKING** when bright and smooth ; no **LABOR** to the plowman ; **ONE-THIRD LESS DRAUGHT** to the team ; thorough **BURIAL** of Weeds, Grass, &c.; great **STRENGTH**, Durability and Economy in its use, and complete pulverization of the soil.

I have, within the past eighteen months, made great improvements in the **WATT PLOW**, and can, with greater confidence than ever, commend it to the farming community everywhere.

GEORGE WATT.

Premiums received during the last three weeks of October, 1873:

Virginia and North Carolina Fair, at Norfolk, October 7, 1873—**ALL FIRST**

PREMIUMS AWARDED ON PLOWS.

The test of plows took place in a sandy loam, with weeds, &c., from four to six feet high. The Watt Plow did not choke at all, and buried the vegetation perfectly.

North Carolina State Fair, at Raleigh, October 14, 1873—**ALL PREMIUMS AWARDED ON PLOWS.**

Piedmont Agricultural Fair, Culpeper Courthouse, Va., October 14, 1873—**ALL PREMIUMS AWARDED ON PLOWS.**

The test took place in a hard, stiff clay soil not plowed since the war, and covered with running briars. The Watt Plow was run seven inches deep without difficulty, and never choked, burying everything under.

Virginia State Fair, Richmond, October 28, 1873—**ALL THE PREMIUMS ON EACH SIZE, RIGHT AND LEFT HAND.**

Also, two special premiums from the Society. Also, two special premiums from the city of Richmond.

The Plows were tested in a sodded and heavy pipe soil. The working of the Watt Plow was admired by all.

Western (N. C.) Fair at Salisbury, October 7, 1873—**HIGHEST PREMIUM.**

Darlington (S. C.) Fair, October 11, 1873—**HIGHEST PREMIUM.**

The **WATT PLOW** of all sizes, from one to four horses, warranted to do better work, with more ease, than any plow in use. If they do not prove so after one week's trial, they may be returned to us, and the purchase money will be refunded.

HARROWS, CULTIVATORS and ALL KINDS OF FARMING IMPLEMENTS for sale on the best terms. Send for Circulars.

WATT & CALL,
Sole Manufacturers, Richmond, Va.

dec

POWHATAN RAW BONE SUPER-PHOSPHATE,

MANUFACTURED BY

James G. Downward & Co.

—O—

TO THE PLANTERS OF

VIRGINIA AND NORTE CAROLINA.

We again respectfully call the attention of those intending to use fertilizers on their spring crops to the Powhatan Raw Bone Super-Phosphate, and particularly those who want a reliable fertilizer for tobacco and cotton, as we intend in the future, as in the past five years, to furnish an article which has no rival, regardless of price. Wherever it has been used by the side of any other fertilizer whatever it not excepting the deservedly popular and higher priced tobacco fertilizers of the day, it has in every case proved itself superior.

A few out of many of our certificates from our patrons:

BLACKS AND WHITES, Nottoway Co., Va., Jan. 1, 1872.

DEAR SIRs,—This is to certify that I have used the Powhatan Phosphate along side of three other kinds of fertilizers, each of which cost more than the Powhatan, and the difference in my crop of tobacco was greatly in favor of the Powhatan Phosphate. From my experience last year I think it a No. 1 manure, and recommend its general use.

Very truly yours,

SAMUEL F. EPES.

LUNENBURG Co., Va., Jan. 29, 1873.

GENTLEMEN,—I used your "Powhatan Raw Bone Super-Phosphate" last year on tobacco with perfect success and entire satisfaction.

Very respectfully,

R. H. ALLEN.

DINWIDDIE Co., Va., Jan. 13, 1872.

DEAR SIRs,—In reply to your request, I have no hesitation in saying that I prefer the Powhatan Raw Bone Super-Phosphate, bought of you last spring, to any preparation that I have ever used on tobacco. I wish you to furnish me again this spring.

Yours truly,

WM. B. COLEMAN.

POWHATAN Co., Va., Jan. 30, 1873.

GENTLEMEN,—Yours of 24th, asking my opinion of the Powhatan Phosphate, to hand. In reply, I have to say it acted well on my tobacco—better than a more costly fertilizer that was applied by the side of it.

Yours truly,

Z. G. MOORMAN.

AMELIA Co., Va., Jan. 16, 1872.

DEAR SIRs,—In regard to the Powhatan Phosphate bought of you last spring, I take pleasure in saying that I am much pleased with its action on my crop. I used it on very thin land, 200 pounds to the acre, and my tobacco weighed better than any crop I have ever raised. I wish you to furnish me again this spring.

Yours, &c.,

GEO. H. WILLS.

HARMONY, Halifax Co., Va., Jan. 20, 1872.

GENTLEMEN,—You request me to give you the result of my experience in the use of Powhatan Raw Bone Super-Phosphate. I have used it successfully for two years, 1870 and 1871, and I think it the cheapest fertilizer I have ever used, and expect to use it again the coming season.

Yours truly,

EDWARD MOORE.

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FOR WHAT?
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What farmer is not familiar with these words of the merchant, and yet the same suicidal policy is pursued year after year, draining the country of money.

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FROM RICHMOND :

8:30 A. M. MAIL TRAIN.—For Gordonsville, Charlottesville, Staunton, White Sulphur, Hinton, and all intermediate Stations, daily (except Sundays), arriving at Hinton at 10:10 P. M. This train connects at Gordonsville for Orange, Culpeper, Warrenton, Manassas, Alexandria, Washington, and the North, and at Charlottesville for Lynchburg, Bristol, Knoxville, Chattanooga and the South.

4:45 P. M. ACCOMMODATION TRAIN.—For Gordonsville and all intermediate Stations, daily (except Sunday), arriving at Gordonsville 8:30 P. M.

9:30 P. M. CINCINNATI EXPRESS.—For Gordonsville, Charlottesville, Staunton, Goshen, Milboro, Covington, White Sulphur, and all Stations west of White Sulphur, daily (except Sunday), arriving at Huntington, 5:30 P. M. This train connects at Gordonsville for Washington, Baltimore and the North, and for Lynchburg, Bristol, and the South, and at Huntington with the Steamers Bostona and Fleetwood for Cincinnati and all points West and Southwest, arriving at Cincinnati 6 A. M.

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[my—tf]

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Eggs carefully packed. Chickens to sell after July.

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Apply to local Agents, or any commission merchant in Richmond.

Where Agricultural clubs or Associations wish to purchase in large lots, the rate
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Satteens at 35, 50, 65, 70, and 75c.—a reduction of twenty-five per cent.; Empress Cloths at 35, 50, and up to 75c. per yard; Silk-corded Poplins at 75c. per yard, worth \$1.25; Poplin Alpacas—best quality—at 40c. per yard, sold everywhere at 50c.; Corded and Plain Alpacas at 25c. worth 35c. per yard; Black Brocaded Alpacas at 25c. worth 50. per yard; Black Alpacas, Mohairs, and Brilliantines at all prices;

Bombazines from 1.25 to \$2 per yard; Australian Crepe at 50c. worth 75c. per yard;

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Doubled-faced Cotton Poplins at 16 $\frac{3}{4}$ c. per yard, worth 30c.;

Calicoes at 6 $\frac{1}{4}$, 8 $\frac{1}{4}$, 10, and 12 $\frac{1}{4}$ c.;

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Colored Flannels in all qualities;

Bleached and Unbleached Canton Flannel from 12 $\frac{1}{2}$ to 45c. per yard;

Domestic Gingham at 17, 12 $\frac{1}{2}$, and 16 $\frac{3}{4}$ c.;

Cheviot Shirting at 16 $\frac{3}{4}$ c. worth 25c. per yard;

Linseys from 15 $\frac{3}{4}$ to 40c. per yard; Bed-Tick from 10 to 35c. per yard;

Doeskin Casimere at \$1 per yard worth \$1.25;

Excellent Satinets at 50, 60, and 75c. per yard; Kentucky Jeans from 16 $\frac{3}{4}$ to 50c. per yard;

Charlottesville Casimeres at a very small advance on manufacturers' prices; Water-Proof Cloths at 75c., 1, 1.25, 1.50, and \$1.75 per yard; Black and Brown Velveteens at 50c. worth 75c. per yard;

Black and Colored Velveteens in all qualities; Trimming Velours, in all colors, at \$1, and \$1.50 per yard; Silk Velvet, black and colored, for trimming and millinery use; Table-Cloths, pure linen, two yards long, at \$1 worth \$1.50;

Linen Doylies at 50, 60, 75c. and \$1 per dozen—all 25 per cent. below regular prices; Huckaback Towels from 1.25 to \$9 per dozen; We call particular attention to our Towels at \$2.25 and \$3 per dozen; Napkins at 1.25, 1.50, 1.75, \$2, and up to \$6 per dozen; Linen Damask for table-cloths from 50c. up to \$2 per yard; Extra Long Table Cloths from \$8 up to \$20; Cotton Diaper at \$1.25 and \$1.50 for a piece of ten yards, worth 1.75 and \$2; Linen Bird's Eye Diaper at 30c. worth 40c. per yard; A full assortment of Ladies' Cloaks, Water-Proofs and Shawls, all at great bargains; Gentlemen's Shawls and Gardigan Jackets, very cheap; White and Colored Bed Blankets, all sizes and qualities, at extremely low prices; Calico Comfortables, home manufacture, at 2 and 2.50 worth 3 and \$3.50; Carpets, Matting, Oil-Cloth, Rugs, Mats, and Window Shades at reduced prices; Children's Carriage Blankets at \$1.50 worth \$3; Silk, Linen, and Cotton Handkerchiefs, in all qualities; Nubias, Hoods, Breakfast-Shawls, Leggings, Scarfs, and Sarques; Genuine Buck Mits, Gloves, Gloves and Gauntlets; Bobbin Edging, 18 yards in a piece, for 50c. worth 5c. per yard; Worked Dimity Bands at 10c. worth 20c.; Clark's and Coat's Spool Cotton at 70c. per dozen; Machine Needles from 40c. to 50c. per paper of ten needles; Best Machine Oil at 15c. per bottle; Tidies at 35 and 50c. worth 75c. and \$1; Gilt and Jet Jewelry in great variety; Ladies' Lisle Collars at 50c. per dozen, \$1.50 Collars at 1, 1.25, and up to \$2.50 per dozen; Gentlemen's Linen Collars at 60, c7 and \$1 per dozen worth 2 and \$2.50; Gentlemen's Recherche Cuffs at 1 worth .45per dozen; Crochet Edgings at 15, 25, and 50c. for a piece of twelve yards, worth a good 10c. per yard; Neck Scarfs at 25, 40, 50c. and up to \$1.50—all much below usual prices; Full-width Unbleached Sheeting at 28c.; Full-width Bleached Sheeting at 33c.; New York Mills and Wamsutta Cotton at 18c. per yard; Excellent yard-wide Bleached and Unbleached Cotton at 10 and 12 $\frac{1}{4}$ c. per yard, and thousands of other bargains at

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NO. 1 PERUVIAN GUANO,
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FIELD, GRASS, AND GARDEN SEEDS,
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Of the EARLY ROSE, EARLY GOODRICH, PEERLESS, and other choice varieties.

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EGGS FOR HATCHING

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I warrant one-half of each dozen Eggs
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State Fairs, for best variety. 3 lbs. by mail,
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Free at Chili or Rochester Station. Circular
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8 nice Everblooming Roses, mailed free \$1.50
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1,000,000 Fruit and Ornamental Trees.

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[Feb—18

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of any strictly Agricultural paper published at the South. Great care will be taken to exclude all but reliable advertisers—such as we can commend to the confidence of our readers—and attention will, from time to time be called to the advertisements, in order that our patrons may realize the greatest possible benefit from them.

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Editor and Proprietor,
1115 Main Street, Richmond, Va.

THE SOUTHERN PLANTER AND FARMER,

DEVOTED TO

Agriculture, Horticulture and the Mining, Mechanic and Household Arts.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON,

EDITOR AND PROPRIETOR.

T. L. PAYNE,

ASSOCIATE EDITOR AND BUSINESS AGENT.

New Series.

RICHMOND, VA., JUNE, 1874.

No. 6.

In the view which we have hitherto taken of the condition and progress of the agricultural interests of the South, we have been disposed to present it in its most flattering aspect, and at all times have aimed to take a hopeful view of the situation. But there are difficulties and dangers in the way of progress, which did we fail to note, we would fall very far short of our duty as a citizen, a farmer and a journalist. One difficulty which meets us at the very threshold is the disinclination among the better class of our people to engage in any pursuit that requires manual labor for its successful prosecution. This indisposition, which in many cases amounts to aversion to labor, exhibits itself more prominently among the very class to which we look for improvement than any where else,—we refer, of course to the wealthier and more refined among our farmers and their well educated sons. So long as these young men, at once the hope and pride of the State, are encouraged to leave the farm and rush into the already overcrowded professions, or even to accept a second rate clerkship, rather than engage in the more laborious, but far more independent avocation of tilling the soil. We cannot hope to make a progress equal to that made by States whose best and most intelligent men are not only identified with the farming interest, but are actually engaged in the arduous duties of the farmers' life.

But the young men are not very much to blame after all. It must be confessed that the prevailing sentiment among the higher classes even of our rural population has been until recently, if it is not still, averse to labor, and our society has frequently been rather inclined to look down upon those compelled to labor for a livelihood, and in cases where persons above the necessity chose to labor it was considered an unfortunate idiosyncrasy rather to be pitied than emulated.

All this thing must be changed. Our sons must be reared to labor and to think that labor is honorable. Our daughters must be taught that the bronzed face and hard hand of the farmer who designs to

hold the plow or drive is not degraded by his occupation. And society at large must learn to respect the class whose labor and efforts must lay the foundation of all our prosperity. This change of sentiment must begin at home among the farmers. They must respect themselves and their calling. No one is likely to place a higher estimate upon a man's occupation than he himself does, and unless we ourselves feel the dignity and importance of our calling we cannot blame others for not doing so.

THE IMMIGRATION QUESTION AGAIN.

Our Legislature has again adjourned without making any adequate provisions for publishing abroad the advantages offered by our State to emigrants from abroad. The plea that we are too poor to incur the expense is hardly admissible, inasmuch as it is confessed even by those who are opposed to Legislative appropriation for that purpose, that any reasonable appropriation, properly managed, would soon bring in a hundred fold more capital, the taxes upon which would re-imburse the State in one year. Our farming population are suffering now more from want of available capital than anything else. All their capital is invested in land, which is lying unproductive for the want of money and labor to improve it. Could one-half the land of the State be sold to foreign capitalists, or to persons who would locate upon it and cultivate it, and the money thus obtained applied to the cultivation and permanent improvement of the other half, the tax paying ability of our people would be far more than doubled and the general prosperity of the whole people greatly promoted.

We do not know, however, but that this advertising abroad of the lands of the State might be accomplished by the farmers alone in their associated capacity, either as a State agricultural convention or through the instrumentality of the Granges and the State Grange.

We would like to have the views of those most interested on this subject for the next number of the *PLANTER*.

FARM LABOR.

With the opening of the spring the ever important question of labor presents itself again. It is well known that hitherto we have considered the negro the best, as he is the only available farm laborer for the South. But each year, while it increases the demand, diminishes the supply of this kind of help. Various causes operate to bring about this result. The demand for labor and higher prices paid in the cotton States has induced a constant stream of emigration Southward ever since the war. The public works, including mines and quarries, paying higher wages than the farmers could afford to pay, have drawn many others away, leaving generally upon the farm the laziest and least enterprising, and hence the least efficient class of laborers.

Our own experience induces us to believe that the time is rapidly approaching, if indeed, it has not already arrived, when we will have

to look elsewhere for our laborers. There are two ways of meeting this difficulty, both of which should be measureably adopted by our farmers. One is for the farmers themselves and their families to do more of the work themselves, and by the introduction of labor-saving implements, lighten and facilitate the seeding, cultivation and harvesting of their crops. By this means the labor now at our command, would be rendered more productive and there would be less necessity for resorting to the other remedy, which is the introduction of foreign laborers. Though opposed to the indiscriminate introduction of foreigners, especially of the lower classes, amongst us, we still believe that there is a large number of poor laborers and tenant farmers in England, Scotland and Germany, and perhaps other countries of Europe, who would be greatly benefited by coming among us, and whose coming would add greatly to the supply of skilled and intelligent labor. After trying almost every nationality and seeing them tried by others, we can confidently recommend to the farmers of Virginia the laborers of the countries above mentioned as the most docile, faithful and best calculated to meet the wants of the farmers. As stock men, the Scotch and English surpass all others, and the German is perhaps the best gardener and cultivator of the soil to be found anywhere. It is true that with the employment of such labor there would, of necessity, be a great change in the general management of the farm, and that the price of farm labor would be considerably advanced. But we also believe that the increased efficiency and honesty of the service given would more than compensate for the additional cost. While we do not recommend or desire an entire abandonment of the old system, nor desire that we may be ridden of the negro, yet we would like to see an effort made to supply the constantly increasing deficiency of farm labor by the introduction of foreign laborers.

WE SHOULD NOT DEPEND UPON ONE CROP.

The recent sales of tobacco in Richmond and elsewhere have not been at prices calculated to remunerate the PLANTER and many of our friends who depended almost exclusively upon the proceeds of this crop to discharge last year's liabilities and to provide for the expenses of the current season, go home disappointed and despondent. This is another lesson for us, and should teach us how very unsafe it is to rely entirely upon one crop for money and success. We must certainly have some other resource than this. The farmers along the tide-water rivers have long since learned to diversify their products, and there is no part of our State so prosperous as the trucking districts, while the farmers of the upper country away from railroads and rivers cannot profitably engage in raising fruit and vegetables for the northern market. They can raise hay and stock profitably, so far as immediate return is concerned and very profitably when we consider the ultimate improvement of the land. There is no hope for the farmers of Virginia unless there is a change for the better. If we continue to cling to the time honored system of our money crop only, and that an almost exhausting one, and clear up and wear out and clear up and

wear out more land every year, it is only a question of time, and not a very long time either, when the sheriff will sell us out and pay a small per cent. on our indebtedness.

NOTES FOR THE MONTH.

We have never, we believe, seen so much cold, wet weather through April and May as we have this Spring. Farmers generally are very backward with their work and unless the season henceforth is peculiarly favorable, there will undoubtedly be a short crop made. Especially will this be the case with corn and tobacco, the planting of which has been much delayed and will necessarily be late.

THE CORN CROP.

It is hoped that most of our farmers have completed the planting of this crop, yet there will doubtless be many places yet unplanted owing to the wet and backwardness of the season. Of course these should be planted immediately if possible and if delayed too long, to be sure of maturing a crop, it would, perhaps, be well to drill in corn very thickly and insure a fodder crop.

This is one of the best, most inexpensive and surest crops we can make, and more food for cattle can be raised in this way than in any other on the same land.

We are disposed to recommend the crop very highly from our own experience, which has been very favorable. The land should be prepared as for any other crop and then laid off in perfectly straight rows, from 30 inches to 3 feet apart, and drilled in at the rate of about two bushels per acre, about 12 grains to the foot, and then scatter as much as possible over the width of the furrow will be about right. The seed may be sown by a corn planter or wheat drill, but we prefer hand sowing because it can be spread out across the entire furrow giving more distance to the plants in the rows. As soon as the plants are well up pass over the whole with a harrow and afterwards with a coulter or cultivator stir the soil once or twice is all that is necessary. We have found that cultivation pays as well on this crop as any and generally stir our soil frequently.

The greatest drawback to the sowing of corn is the difficulty of curing it. This difficulty arises from the fact that it is generally sown too late and too thickly and never reaches that condition of maturity when it is easily cured, and also when it contains the greatest amount of nutriment. If it is drilled in, however, any time in June, or if the early varieties or northern seed be used, in July it will mature sufficiently to cure easily.

When the entire crop is in bloom, the earlier blooms having began to dry up, and the small ears that will form on many stalk are in the dough (*i.e.*, good roasting ear), is the proper time to cut up the crop. We usually use the ordinary corn knife, laying the stalks as cut in small piles to cure awhile, but never leaving any down at night. One precaution is perhaps necessary here. It should never be cut when there is any external moisture, either dew or rain, upon it.

Set up in medium sized shocks and after a few days tie them firmly near the top and they will usually keep well all through the winter in

the field. A better plan, and the one we usually adopt, is to sit up in small shocks at first and after a few days or a week put two or more shocks together according to size and tie them. We have depended largely upon sowed corn for feed during the last two years and have not lost 5 per cent. from spoiling in the field. The amount of feed that can thus be made upon an acre of good land would astonish any one.

MILLET OR HUNGARIAN GRASS may be sown now and on good land will yield from $1\frac{1}{2}$ to 2 tons of hay per acre. Prepare the land as for oats and sow $\frac{1}{2}$ bushel of seed per acre, harrow and roll so as to have smooth surface to cut over when mowing.

PEAS FOR FALLOW should be sown as early in June as possible. The subject has been so frequently discussed in all its bearings that we give no directions here, simply referring to former numbers of the PLANTER.

TOBACCO.

The planting of this important crop has been much delayed, and there is a general complaint of failure in plants. Every thing should now be done to facilitate the completion of this work where it is not already finished, and when planted, the hoe and the plow should keep down the weeds and grass and keep the surface mellow.

SWEET POTATO SLIPS.

if not already out, should be gotten out and as soon as possible, and

LATE IRISH POTATOES

had better be gotten in the ground as early in the month as convenient. Fresh manure should not be used with this crop if it can be avoided, and if used should be broadcasted instead of putting in the drill. It should be remembered that the potato is a potash plant and manures rich in potash will greatly improve the crop.

THE STOCK

will require very little attention during this month. Early lambs should go to market as soon as large enough, which should be in May and very early in June. The price declines as the season advances, and a week will frequently make a difference of a dollar in the same lamb. Farmers should understand this and act accordingly.

Stock on pasture should be regularly salted at least once a week, and always have access to cool, clear running water.

Agricultural Department.

[For the Southern Planter and Farmer.]

[The following Essay, written by our Associate Editor, received the premium of thirty dollars and Diploma, at the last meeting of the Agricultural Society of Virginia.—L. R. D.]

THE BEST METHOD OF CULTIVATING A FARM OF TWO HUNDRED ACRES IN THE GRANITE SECTION OF VIRGINIA.

That the present average of production on the lands of Eastern Virginia is below the point of profitable culture is acknowledged by all who are cognizant of the facts. The causes which have led to this condition are also apparent to those acquainted with the method of cultivation practiced for generations in this section.

Long continued cultivation of a thin stratum of the surface in crops that took everything from the soil and returned nothing, has together with the washing of the rains and snow, deprived that part of the soil actually brought in contact with the roots of plants of every mineral element of fertility, and the suppression of every form of vegetable growth, except such as is intended for removal and sale, has left it nearly equally destitute of humus.

The question then is simply one of abandonment or improvement. We cannot continue long to live under the present conditions of production.

How shall we cultivate these lands so that they will yield the largest immediate returns, and at the same time, most rapidly improve? Is a question of importance both to the individual owners and the State at large. Nor is it so difficult a matter after all; the soil contains within itself great power of recuperation. The reversal of the system by which the land has been exhausted will in time without any outside aid restore its lost fertility. Deep and thorough culture bringing up from the subsoil the mineral elements which the rains and snows of a hundred winters have washed down and deposited there; returning to the land in the shape of manure from stock everything except its most concentrated and valuable products. Plowing under green crops grown for that purpose to restore the humus, and with it ammonia to the soil, and if we add to all this the purchase from abroad and application of mineral fertilizers to restore the wastage of such crops as are sold; all this with the practice of a suitable rotation in crops will in time make farming in Eastern Virginia both pleasant and profitable.

Without further introduction, we will suppose then the farm to contain 200 acres of the light gray land with clay subsoil common to the section under consideration. Thirty acres should be left in timber and twenty acres more in permanent pasture, and enclosed together with a strong fence, giving together a range of fifty acres for the loose stock of the farm; ten acres immediately around the house will be used for orchard, yard, garden and barnyard, leaving 140 acres for general culture. This we would divide into seven shifts, to be cultivated as follows: forty acres in wheat, twenty in corn, twenty in oats and twenty in peas for fallow, and forty in clover. A diagram is here

with furnished, showing the way in which these crops will succeed each other on the respective fields. In the arrangement of the various fields, care should be exercised that each may be easily accessible from the barn without passing over the growing crop on any other field. This will necessitate the making of roadways along the lines of division. These roadways should be located at once, and should be thrown up by back plowing at least twice and the ditches made broad and shallow. The space occupied need not exceed twelve feet from the centre of the ditch on either side, and the whole land occupied need not exceed sixteen to eighteen feet in width. This should be thoroughly prepared, and sown in grass without any grain. The following mixture is recommended for this as well as for the permanent pasture, mentioned elsewhere: 1 bushel orchard grass, $\frac{1}{4}$ bushel redtop (herds grass), 4 quarts timothy and 4 quarts red clover, for each acre seeded. The orchard grass to be sown alone, the others mixed and sown on the freshly harrowed surface, and the whole nicely rolled. This should be done as early in the fall as practicable—say September. By this management the roadways will become about the most productive portions of the farm. The grass can be regularly mown when not pastured, and should receive an occasional top-dressing,—with a little care the grass destroyed by the passing of the farm teams will amount to very little.

We will suppose ourselves now at the beginning of the cropping year the first of September. All the farmers' energies should be directed to the preparation of the land for wheat. Old lines of fencing interfering with the new plan of operations should be removed; such rails as are fit, transferred to other lines and remainder carted to the wood-pile or burned upon the spot. Stumps, grubs and everything interfering with the perfect cultivation of the land should be dug up by the roots and burned. Two good, strong horses or mules to a two-horse Watt plow, or Farmers' Friend plow, should open a furrow seven inches deep and be followed by one horse attached to a subsoiler, walking in the furrow and loosening the subsoil to the depth of five inches more. After trying various subsoil plows, we are inclined to recommend to the farmers as one cheap and available on most every farm, the common one-horse cast plow, either Watt, Farmers' Friend or Dixie, (the latter best on account of its greater weight), with the wing or mould-board removed, using nothing but the point and land-side.

About the 1st of October the ground having been previously thoroughly prepared by the diligent use of the harrow, the seeding of wheat should commence. The use of the drill is urgently recommended, both on account of economy in seed and superiority of crops so seeded. Where the drill is used, from four to five pecks will be amply sufficient for the acre; in broadcasting at least one peck more should be sown. The wheat having been seeded, all the available manure should be scattered evenly over the surface as soon as possible. Of course, if the means is at hand, some good commercial fertilizer should be used, especially on that part intended to be sown in clover in the spring. Taking advantage of the dry spell that is likely to occur late in February or in March, a light sharp-tooth harrow, the teeth slightly inclined backward, should pass over the wheat, twenty acres should then be sown in red clover, at the rate of eight quarts to

the acre and the whole nicely rolled. As soon as the clover is up, 100 lbs. of plaster per acre should be sown upon it.

After finishing the seeding of wheat, the farmer will have some leisure to make permanent improvement. If in a section requiring it, the outside fencing around the entire farm should be made good—circumstances alter cases, but when there is no special reason against it, a ditch opened either with the spade or plow, the dirt thrown on the inner side, and post $9\frac{1}{2}$ feet apart on the embankment with split slats, three or four in number, nailed to them, is recommended as the most efficient and economical fence for Eastern Virginia. The land for spring crops will now claim the farming attention. Whenever during the winter the condition of the ground will admit of it, the plows should be going. Old sod land should, if available, be planted in corn, or it may be planted on wheat stubble. The preparation should be the same as for wheat, and the manure accumulated during the winter should be applied broadcast to this crop.

As early in the spring as the season will allow, (generally indicated by the bursting into leaf of the hickory buds), the land should receive a final harrowing, and be immediately laid off and planted. The rows should be perfectly straight, and running lengthways the field, making them as long as possible; unless the ground is very hilly it will not pay to grade the rows, making the curve with the inequalities of surface. The corn should be planted in rows four feet apart, three grains in a hill two feet apart in the rows, and thinned to one stalk in a place at the second working. If the rows are opened with a plow the corn can be easily covered with a two-tooth cultivator. As soon as the corn is up, pass over the rows lengthways with the same harrow used on the wheat in the spring, and repeat the process every week or ten days until the corn is eight or ten inches high. If the rows are not too short, so as to make a great deal of turning, a man with a brisk team and a boy to uncover the stalks, will go over twenty acres in two days. The next cultivation should be given with the one-horse plow, with the wing removed just as it is used for subsoiling, running the bar side close to the corn, after that, the seven-tooth cultivator will usually do all the work needed. Corn should be cultivated as soon as practicable after every rain that runs the surface together, and at any rate, every ten days during its growth, until it begins to bloom.

The oat crop should be sown upon the corn land of the previous year. The surface should be made fine and mellow, and from six to eight pecks of seed sown per acre and raked in, unless the drill is used in which case one-fourth less seed will answer.

Early in June the land to be sown in wheat, should be prepared nicely and five pecks of black peas sown per acre broadcast, or three pecks drilled in, it will be found that if each alternate tube of the drill is stopped, and the peas as thus planted in rows eighteen inches apart are once coultured, the crop, both of vine and pea, will be heavier and the saving of seed will nearly pay for cultivation.

We now have all our crops planted, and with a few brief directions for harvesting we will pass to other subjects. Wheat and oats should be cut before fully ripe, tied in moderately sized bundles and set up twelve to sixteen together, until cured and then stacked or hauled into the barn as soon as possible. Corn should be cut up by the roots

as soon as the grain is glazed and set up in straight close shocks, sixteen rows together, shock twenty steps apart in the rows. In the course of from four to six weeks the shocks should be taken down, the corn shucked off and carried to a rat-proof crib, and the fodder again set up and tied firmly around the top with grapevine or stalks. A better plan if there is room, is to haul the corn, stalk and all to the barn and shuck it during inclement weather.

Of the peas a sufficiency should be gathered for seed, and if the farmer can then turn his hogs upon them for a few weeks he will make some very cheap pork without materially lessening the value of the fallow.

The stock to be kept on a farm of this size would vary, of course, with circumstances. The team actually necessary need not exceed three first-class animals, and it is recommended that these should be two good, large, brood mares and a strong, active horse. The mares should be regularly bred, and would produce a foal almost every spring, worth, if a mule, at least \$50 at five months old. This will not at all interfere with their general usefulness on the farm. The horse could do all the carting and fast work.

Of cattle, at least four good cows should be kept, and their breeding so arranged as to have two fresh in the spring and two in the fall. For the general purposes of the Virginia farmer the Ayrshires and Devons are believed to combine more desirable qualities than any other pure breed. Grade Shorthorns are also excellent animals for general utility.

Of hogs, no more should be kept than necessary to supply the family with meat. Two good sows, either Essex or Berkshire, and a boar, which should always be the very best of his class, will be all the stock needed. Pigs should come in February and August, and protected from the cold of the one and heat of the other. The February pigs, if pushed as they should be, will net 200 lbs. by the middle of November, and the August pigs will make nice roasters and shoats before cold weather comes. There will thus be no surplus stock to carry through the winter. The best food for pigs, in our experience, is *mush and milk*. Brown-stuff, potatoes, cymilins, the refuse of the garden and orchard all go to make up a good bill of fare for his pigship.

The remaining stock of the farm should be sheep; fifty good, strong common ewes should be purchased and bred early in the fall to a thoroughbred buck of some one of the mutton breeds. The ewe lambs from this cross should be preserved and bred to another fine buck of the same breed with the sire. In this way a large flock of high grade sheep can soon be established. The buck lambs should be sold off from time to time and will always bring remunerating prices; a farmer may very safely calculate on a net income of from five to six dollars from every good ewe well kept. If the keeping of sheep is found desirable it would be well to make a change in the rotation, so as to give at least three, if not four fields to grass. This can be readily done by omitting either the peas or one field of wheat, or both. Another change which can be advantageously made when a full stock of sheep is on hand, is to sow rye in the corn in August to be pastured during the winter. Not less than one hundred breeding ewes should be kept upon a farm of this size, yielding an income of from

\$500 to \$800. As the stock increases the old ewes may be sold off, young ones taking their places.

Of the ten acres reserved around the house, three acres will be occupied by the yard, garden and barnyard: four acres should be planted in apple trees, three-fourths of which should be standard winter varieties. This would require 200 trees. 170 select peach trees should occupy the spaces between in the rows. Not less than two acres should be occupied by pears, grapes, currants, &c., &c., and one acre planted in plum and cherry trees, and enclosed with a six feet picket fence and used as a poultry yard where the poultry can be confined when desirable.

The buildings required for a farm of this size should consist of a good and convenient dwelling with all the modern improvements with water convenient; a barn sufficiently large to give shelter to all the animals and tools kept upon the farm, with storeroom overhead for the straw, hay and stalks. A good manure shed, where a bountiful supply of good, dry litter should always be kept and where the manure may be deposited as it is removed from the stalls to be worked over by the hogs. A good rat proof corn crib; a wood shed large enough to hold a half year's supply of wood; smoke house, poultry, &c. No plan will here be given for a barn. As a general suggestion as to the amount of space needed to accommodate the stock, we would say that each horse should have from 80 to 100 square feet of standing room, cows from 50 to 60 feet and sheep 10 feet. The building should be so arranged that feeding can all be done from a passage-way without going among the stock. The floor overhead should be tight so as catch the grass seed. I omitted to state in the proper place that clover should be cut when the largest part of the crop was in full bloom and cured and stored away as soon as possible, a direction that applies equally to every kind of grass.

Two or three comfortable dwellings for laborers should be built conveniently close to the dwelling, yet far enough away and from each other to afford sufficient privacy and enable the occupants to keep a few chickens and have every comfort of home. Generally laborers well treated and their wants and comforts supplied will be more diligent and accommodating.

Of the amount of labor necessary on a farm of this kind it is utterly impossible to form any correct estimate. For the mere cultivation and saving of the crops, the other work, including harvesting, being done either by the job or day labor, one man and a boy large enough to plow (the owner himself lending a helping hand) will be found sufficient. It is equally difficult to estimate the return to be expected; but after it has been under this system for seven or eight years we should be very

much disappointed if the income aggregated less than three thousand dollars.

The items we should expect to be about as follows :

40 acres of wheat 20 bushels, 800 bushels at \$1.75.....	\$1400
100 bbls. apples at \$4.....	400
Peaches, pears, &c.	200
600 lbs. butter sold.....	200
2 colts sold.....	100
100 sheep and lambs sold.....	500
400 lbs wool sold.....	200
4 head young cattle, the steirs fattened at 3 years and heifers sold with calves.....	150
Poultry, eggs, &c.....	50
	<hr/> \$3200

If the land in the orchard and garden is highly cultivated, as it should be, four or five hundred dollars might be added to the above for potatoes, cabbage, &c.

I have said nothing of tobacco, because it is a crop that cannot be introduced into a general rotation, but requires special preparation and extra force. If cultivated at all it should occupy part of the field devoted to pea fallow, and being highly manured with some commercial fertilizer, will leave the ground in good condition for the succeeding wheat crop. It is also recommended that the oat stubble should be plowed immediately after harvest and corn for fodder drilled in thickly on a large part of it. This should be cut when in bloom and after curing tied in bundles and stored for winter use. Ruta-bagas and turnips may occupy part of the stubble. Commercial fertilizers should be used on these crops. Of fencing we would recommend as few inside lines as possible. A light portable fence may be used, sufficiently strong to restrain the cows and sheep during the day and they should all be returned to the barnyard or permanent pasture at night. The manure heap will thus be largely increased and the improvement of the farm greatly accelerated. I have already intimated that the best way to apply manure to these lands is to broadcast it upon the freshly plowed surface. This we firmly believe will give fifty per cent. better return than any other mode of application.

If upon the farm there are any wet swampy spots they should be drained and possibly laid down permanently in grass.

The following table will show at a glance the rotation proposed to be practiced, together with such variations as are recommended elsewhere. One more suggestion. In feeding stock all the long food should be cut except, perhaps, hay, and that is best cut if the labor is attainable. Sinclair & Co's Masticator is recommended.

Stock should be regularly fed under the immediate supervision of the owner. Milk cows should receive a moderate allowance of meal night and morning throughout the year and everything kept upon the farm should always be in a thriving condition; nothing is a surer index of bad farming than lean and hungry stock. Stock of every kind to be profitable must have their wants all supplied and be made comfortable at all times.

No. of field.	1	2	3	4	5	6	7
1874.	Wheat.	Peas.	Oats.	Corn.	Wheat.		
1875.	Clover.	w	p	o	c	w	
1876.	clo	clo	w	p	o	c	w
1877.	w	clo	clo	w	p	o	c
1878.	c	w	clo	clo	w	p	c
1879.	o	c	w	clo	clo	w	p
1880.	p	o	c	w	clo	clo	w

If more stock should be kept then as follows, or the peas may be omitted and the corn planted after wheat on clover:

No. of field.	1	2	3	4	5	6	7
	Wheat.	clo	o	c	clo	clo	clo
	clo	w	p	o	c	clo	clo

[For the Southern Planter and Farmer.]

STOCK AND INCLOSURES.

When I reflect upon the evils of our present system of care with regard to stock and enclosures, I am tempted to exclaim with Cicero. "Inamdin abutere nostra patientia!" Farmers have Clubs, Societies and Granges for the protection of their interest, but seem to ignore to a great extent this heavy burden upon agriculture in Virginia and many other States. We are continuing a system handed down to us from early settlement of the country, which has ceased to be adapted to our wants and interests. We are constantly told by agricultural and newspaper writers, especially amongst our Northern friends, that we keep and attempt to cultivate too much land. This, to a great extent is true, but as long as we have our present laws with regard to stock and inclosures, it will be difficult to bring about a change. Farmers, whether they own stock or not, whether they keep up or turn out their stock, don't like the close proximity of those who habitually run their stock at large, and, as is too generally the case with this class, give but little attention to their care and feeding. They know from experience, how difficult it is to protect themselves from ill-fed stock habitually using around their fields. Reason and experience also teach us that it is relatively much more expensive to inclose small than large areas. It takes half as much material to inclose one acre of land as it does to inclose four, and twice the quantity necessary to inclose four will inclose sixteen and so on in geometrical proportion.

If all the land now cultivated in Virginia was divided into small farms, the expense and labor of inclosing it would be enormous. Farmers are compelled to keep too large a per centage of their lands in forest, to supply the heavy and constantly recurring demand for fencing material. Who can estimate the value of the timber annually destroyed for this purpose? The average duration of the ordinary worm rail fence is about ten or twelve years. From experience and observation, I am inclined to think that it takes an average of one-sixth of the labor employed in agriculture to make and keep the fencing in good repair. Our system was, to some extent, endurable during the existence of slavery. Labor was then permanently attached

to the farm, and could be combined for the culture of large areas. Agriculture was more homogeneous, and farmers needed and kept the same domestic animals and required the same kind of inclosures. With the abolition of slavery, a new state of things has been brought about. There is no longer the same similarity of agriculture. Farmers are turning their attention to special crops and industries, and no longer need or keep the same domestic animals. Hence a conflict of interest has arisen and must continue to increase and ultimately end, as it has done in all old settled countries, by devolving upon the owners of all stock the burden of keeping and providing for them.

The only question for us then in Virginia is, has the time arrived for this change? If not ready for a thorough change, can't we have some modifications? Can't we at least stop the smaller domestic animals—viz.: hogs, sheep and goats from running at large, or at any rate make the owners of them responsible for damage done by them to others. Is it not bad economy to run them at large, more expensive than to keep them up? Do the benefits of the outside range to these animals compensate for the heavy expense of protecting our crops from destruction by them? Would not the labor now employed in this way, if employed in producing food for these animals, procure for us a cheaper and more abundant supply of meat? Sheep are not held in common by our farmers, and it is not right or just to require the large majority who do not keep sheep to fence for the benefit of the small minority who do. Horses and mules are but seldom permitted to run at large, and if relieved from the necessity of fencing against the smaller stock, especially hogs, the great majority of the farmers would soon find it to their interest to keep up their cattle. The means and material required to restrain the larger stock would be very different from that now used to protect against hogs, and the cost of fencing would be diminished one-half or two-thirds of its present amount. Ditches, hedges, stone, post and rail, and various other things would be substituted for the present expensive, insecure and very perishable worm fence. An immense amount of valuable timber would be saved, and inclosures more permanent, and occupying less space would be introduced. Hogs, with their present privileges in Virginia, are an unmitigated nuisance, costing in the aggregate more than they are worth.

Much complaint is made of the evils arising from the multitude of dogs. I concede these to the fullest extent, but as long as hogs are permitted to run at large, farmers will keep dogs to protect themselves from them. I am aware that the privilege of running stock at large is thought by many to be one of especial value to the poor and small farmers and housekeepers. If right in my view of the subject, this class are most interested in a change. I have already shown that large farmers fence at less relative cost and, consequently, generally have their fields better protected. Tenants and small farmers, on the contrary, fencing at greater cost are not usually so well protected and more liable to suffer from roving stock. I have also shown that our system is not only opposed to a sub-division of the lands, but creates and keeps up a tendency to the absorption of the smaller farms by the larger ones. Besides if, as I contend, it is a tax upon production, it diminishes the profits of labor and adds to the cost of consumption. The subject is a very expansive one, and I have only

touched upon a few salient points. It needs discussion, ventilation and legislation. Politicians are proverbially afraid of new issues and we need not expect anything to be done until the farmers move in the matter. They are more immediately interested and all other classes will await their action. Let the subject then be made one of public and private discussion, and we may hope ere long to secure such changes or modification as will greatly diminish the evils of our present system.

X. Y.

[For the Southern Planter and Farmer.

APPLICATION OF MANURES.

From observation, it seems to me that we should pay special attention to the application of water—the air always applying itself when the conditions are right. No matter how rich our soil may be—no matter how much valuable manure we may put on it—without water we can obtain no results. We must either apply our manures in a liquid form, or else see that enough water is present to dissolve the manure and put it in condition to become food for our plants. They live by drinking, and not by eating. They do not devour the soil: they only absorb the liquids and gasses that come through the soil.

Here is a very important point that should be kept well in mind when deciding on the best way to apply manures. No solid manure of any kind, dung or anything else, can ever enter the roots and be carried to the different parts of a plant as used by it, but must be dissolved or so far decomposed that it will enter in a liquid or gaseous state. Manure, as applied, is not the food of plants as used by them, but contains the elements of food of plants, and must be so far decomposed that it can be dissolved and presented to the different portions of the plant in a solution, so that the kind and amount of these elements may be presented to every part of the plant in such condition that the different elements needed to build up the structure of the plant may be appropriated as wanted. Nothing can be carried into the plant in any other way. Even the silex that is found in the ashes of plants must be dissolved before it can be taken up and appropriated by the plants. The structure of the roots and plants also makes this necessary; for the pores or openings in the roots, through which all plant food must pass, are too small to be seen, except with a microscope, and of course, can pass no hard substance. This being the case, that manure is applied to the best advantage which is most readily dissolved and presented to the roots of plants. If turned to the bottom of the furrow, only the heavier rains will reach it: those will be as apt to carry it down as bring it up, although the roots of plants are nearly, and when small, are in the mellow portion of the ploughed soil. This is especially the case where manure is turned under a sod: if ploughed under in a mellow soil that brakes up fine, it is more generally mixed in where it will be reached by the rains and roots as wanted, but still a large share is at the bottom of the furrow, where it is not so readily found and used. Hence cultivating and harrowing it in is better than ploughing it in, as it more thoroughly mixes it with the soil that is mainly occupied by the roots, applying manure where the most work is done is also a good plan for the same reason.

while it has this additional advantage, that the well-worked and mellow soil more readily admits the rains which are needed to dissolve the manure.

Two things are very essential: first, that the manure should be dissolved—should be ready to be taken up by the roots of plants. Second, that it should be thoroughly and evenly presented to all the roots of all the plants. This, a little consideration will show, can be best secured by surface manuring. The rain, as it falls, is evenly distributed, and it soaks into the ground, if it is all alike mellow, as evenly as it falls. If the manure is finely and evenly spread on the surface all the rain that falls absorbs a portion in its way into the soil, and all that reaches the roots of plants will contain a portion of this dissolved manure. If the manure is worked three inches into the soil, and a portion of the roots of plants, as is always the case, are found in this three inches, then all the water that reaches the roots before it has a chance to get to the manure will be taken up by the roots before it receives any benefit from the manure. If the manure is six inches deep the roots will be mainly supplied before the moisture reaches it, while many small showers that are of great use to plants never reach it at all. If on the surface, every small shower dissolves a portion, which if not taken up by the plants, will be retained by the mellow soil, as the latter is so constituted as to allow scarcely any fertilizing matter to pass off by evaporation. Thus the portion of manure not taken to the plant by one shower may be presented by another. Again, the roots of plants, except to a very narrow limit, are stationary; they cannot go about the lot like cattle or sheep to look up food. Hence their food must be presented to them as wanted, and water and air are the carriers from which they receive it. This is another proof of the great use of water as a means or medium for conveying food to plants; and, with the above, shows the great advantage of having manure in the best place and condition to be most readily and certainly conveyed by water to the plants as wanted. KEASTAR.

[For the Southern Planter and Farmer.]

Mr. Editor:—Some of your readers may be interested in this list of Granges organized by me since April 1st.

Green Bay Grange, 7th April, Prince Edward county, with twelve males and eight females. R. B. Wilson, Master; J. T. Johnson, Secretary.

Liberty Grange, 7th April, Prince Edward county, with eleven males and ten females. E. M. Wing, Master; G. S. Wing, Secretary.

New Store Grange, Buckingham county, with fifteen males and ten females. L. D. Jones, Master; C. Y. Hooper, Secretary. April 15th.

Smyrna Grange, Buckingham, with seventeen males and ten females. H. C. Boughan, Master; W. M. G. Ranson, Secretary. April 16th.

Plank Road Grange, Buckingham, with nineteen males and seven

females. J. W. Hebditch, Master ; E. V. Anderson, Secretary, April 15th.

Gold Hill Grange, Buckingham, with eighteen males and nine females. Dr. Charles F. Moseley, Master ; W. M. Hall, Secretary. April 30th.

Union Grange, Appomattox county, with sixteen males and five females. Gen. W. M. Elliot, Master ; C. H. Chilton, Secretary. May 5th.

Stonewall Grange, Appomattox, with nineteen males and nine females. Rev. Wm. Fisher, Master ; T. J. Stratton, Secretary. May 6th.

Tower Hill Grange, Appomattox, with eleven males and ten females. Jas. A. Walker, Master ; Jas. H. Featherston, Secretary. 7th May.

James River Grange, Buckingham, with sixteen males and six females. Geo. Booker, Master ; G. W. Patterson, Secretary. 12th

Several other Granges will be organized soon in Buckingham—there are now eight in that county.

Generally, in the counties just named, the wheat looks well, forward in growth and of fine color. But in several places, it is backward and pale ; and I heard of the presence of chinch bugs. The common remark, that the crop is exceptionally fine is only in fact correct. It is not as forward, or as promising as it was at the same date in either of the years 1865 and 1869.

Some of the very finest wheat I have seen grows on the handsome farm of Mr. Thomas Homer, an English farmer who has settled in Prince Edward, and who bids fair to take the lead here ; both in the rapid improvement of the farm and in the successful growth of our staple crops.

I have every where heard statements, and in many places have seen evidences of so great a failure in the plant beds as justifies the belief that the tobacco crop of 1874 will be both light and late. In deed, so great and so general a failure of plants is not remembered, if it ever occurred, within the recollection of any old farmer among the many who have spoken to me on the subject.

The best lot of clover I have seen in these counties was seeded in March 1875, while a considerable flock of sheep was running on the wheat. The seed were well tramped into the soil. The sheep continued to run on the lot until the last week in March, and the lot was as bare of any green growth as the public road, yet the crop of wheat was a very fine one, in quantity and quality. But a similar experiment, the same season, on another field in the vicinity, resulted in manifest damage to the crop of wheat. The chief difference in the two cases was that the latter field was grazed by the sheep two weeks later than the other. In this connection, I remember that the late Capt. Nathaniel Price, of Prince Edward, was more successful than any of his neighbors in growing wheat. His crops averaged better than others, in any term of years, and his practice was to put his ewes and lambs on his wheat in February and March, and keep them there while the earth was dry.

Yours truly,

Hampden Sidney, May 14th, 1874.

T. T. TREEDWAY.

[For the Southern Planter and Farmer.]

Allow me to say that I consider your May number more valuable than any number yet published for the year. It is truly worthy of the managers, filled as it is with valuable correspondence as well as news, &c., that is interesting. I am glad, truly glad, to see the farmers of old Virginia determined to have a journal, which shall be worthy of old Virginia and her people.

Allow me too to say that I read with true pleasure and gratification the letter of Mr. Gilmer to the Messrs. T. G. Erhard and others. Mr. Gilmer, in that letter, proves his loyalty and devotion to his mother State as well as to his profession, and by his letters in the SOUTHERN PLANTER AND FARMER and the *American Farmer*, of Baltimore, sets an example well worthy of imitation by old as well as young.

Mr. Gilmer, in another paper, gives us his views on the question of the Dog Tax, and none can deny that they are truthful and to the point. What, indeed, is the use of making any more appeals to our Legislature? Have we not already made appeal after appeal to no effect? Does not the world know that our Legislature would willingly give us the help we so much need and the condition of our treasury so much demands, *if they were not afraid?* They tax our horses, cattle, sheep—in fact every thing, except our worthless dogs.

No wonder that *repudiation* stares us in the face; no wonder that Messrs. T. G. Erhart and many others write to know if our lands are as desirable as we represent them, why we are so much in debt, and why some have come among us and gone back; no wonder that they hesitate to come among us; no wonder that the farmer can't support his family by hard, hard work; no wonder at anything *when we have a Legislature afraid to do its duty!* Afraid to relieve our honest, hard working farmers, by whom they were sent to Richmond, because they well know (by instinct perhaps), that if they *do* their duty they will lose the vote of every Radical voter.

So it has been in regard to the fence law, no one can estimate the amount of our very best land occupied by ugly and zigzag fences. Since the adoption of the fence law our farmers are cleaning up and cultivating their many hedge rows, which they find enriched and the appearance of our country is improved. Should the fence law ever be abolished, it will be an evil day for our farmers, who, trusting in the good faith of their Legislature, have removed most of their long and expensive fences and made simply one or more good pasture fences and are cultivating most of their crops without any protection from other people's stock—which there should never be any need of.

But in regard to the dogs, as says Col. Ruffin, do not let the dog law or any other law prevent your raising sheep. Don't think the farmers of Virginia dependent on a weak Legislature. Let us take our guns, watch the advent of the sneaking and worthless cur across the borders of our own domain and execute justice speedily; or else, as Col. Ruffin says, build a pen and we shall soon be rid of sheep-killing dogs.

In regard to Deep vs. Shallow Plowing, I am convinced that we

frequently do turn up too much of the subsoil on top and I have recently been satisfied of the correctness of Col. Waring's views on the subject. Last week I attempted to re-fallow some land which last fall had been plowed very deeply with a Starke 3 horse plow, turning under weeds and all trash. It was a rough job, the top was as hard and crusty as a brick, while a few inches below was soft and mellow. I am satisfied we should be more cautious as to deep plowing, but not as to *deep subsoiling*, which is always a benefit.

I see many composts recommended, but I will give you one I think I can use to advantage on most crops. Here it is—

15 bushels leached and unleached ashes.

5 bushels hen manure.

1 bag Pacific Guano.

1 bag Flour of Raw-Bone.

4 bags Plaster.

2 bags Agricultural Shell Lime.

I have found this good, a handful to each hill of corn, splendid for potatoes, peanuts, &c., as it contains in a more or less degree the necessary ingredients for each. I have used it on each one of the crops mentioned. I shall drop a thimbleful of plaster on each bud of corn when it comes up, believing it will mitigate to some extent the effects of drought.

Very truly,

Glenmorlan, Va., May 8th, 1874.

H. W. COSBY.

CULTIVATION OF CORN.

Maise or Indian corn has been cultivated in Virginia since its first settlement and the intrinsic value of the plant has made it our most important crop. The Mondamise of the Indian furnishes the civilized man with bread, hominy and whiskey for his own palate, material for his bed and grain and forage for all the domestic animals that minister to his comforts.

The land intended for corn should be well plowed, the depth corresponding with the fertility and depth of the soil, amount of manure to be used, status of drainage, &c. If stiff clay, it should be plowed in beds in early winter, and great attention paid to the direction of the furrows, so that no water may remain on land during the winter. If sandy and clean, it may be plowed just before planting and in any way to suit the surface.

As soon as the land is dry enough in Spring preparation should be made for planting. If it has been plowed early it may be foul or baked with the rains, in which case the land should be re-plowed with a single plow to the depth of three or four inches and harrowed before planting. This is important, too, because it is equal to a good working of the corn and can be done with much less expense than after planting. After the frost is out of the ground the corn should be planted. The time in this climate is very uncertain, extending from April 1st to July 1st. I have made good corn planted July 6th.

The distance apart at which corn should be planted, depends

entirely upon the fertility of the soil. In old times, upon large fields of moderate fertility, the rows were laid off five feet apart, and from three to five grains of corn dropped by hand in the rows three feet apart, covered with the hoe, harrow or foot; the last, we think, the best instrument ever invented for the purpose, if appended to a judicious body. More corn is made in a series of years, by giving the plant reasonable room, and, in every case, the ears are larger and grains more perfect where it is not planted too thick; this is especially so in seasons of drought.

After the corn has been planted two furrows should be thrown up in a ridge in the middle of the row. This may be done before the corn comes up, the sooner the better, as the land thus thrown up becomes pulverent for future use. After the corn is of sufficient size for weeding, two more furrows should be thrown off from the corn to the two already in the middle. The plow should be run as close to the corn as possible, as it leaves less land to be worked by the hoe. The plant now is hoed and thinned out to the number of stalks deemed best. This should be done by careful hands for, though corn is very tenacious of life, if this operation is not done carefully the corn is checked in its growth. The stalks not wanted should be dug up by the roots.

After weeding and thinning the corn is left to attain sufficient size to "take the dirt;" in the meantime should the ground become hard and baked, the cuff coulter may be used with great advantage.

The after cultivation consists in reversing the land; two furrows are first thrown to the corn high enough to reach in the middle and fall around the stalks, care being taken not to cover them up. After this two more furrows in like manner, then split out the middles when the corn is considered "laid by." This working should not be done rapidly, but as the corn needs soft earth for the extension of its roots, besides a fresh surface is favorable to the absorption of fertilizing gases and moisture and causes rapid growth. Even after the corn is "laid by" a working with the cultivator is of great service if the land becomes baked.

It will be seen from the above that we prefer ridges and the use of the turning plow in the cultivation of corn. The soil absorbs in proportion to its surface and ridges furnish a wider area. They do not bake so easily as a flat surface, and drainage to the plant in early life, is more easily effected. The rain falling upon the earth is quickly dissipated by the atmosphere which is the great storehouse from which moisture is obtained, and as large and as fresh a surface as possible should be presented for its action. The turning plow does not cut the roots of the plants if used as above; the extension of the roots follows the plow, but, even when cut there is still a compensation, as the cut roots throw out a greater number of points in search of food. The plow is by far the most efficient instrument for killing grass. All manures should be scattered near the surface; if applied to the hill they should be made to cover as large a space as practicable or they will not exert their greatest efficacy, after the plant begins to send out its rootlets.

The Prolific is the best corn for our use, it can be planted thicker, gives a greater number of good ears to the stalk and yields more

sound corn to the hill. The grain is white, hard and very free from rot. It is earlier than most of other kinds of white corn.

[For the Southern Planter and Farmer.]
TUCKAHOE FARMERS' CLUB.

The April meeting of this club was held at "Linden," the residence of J. A. Lynham.

The farm was first inspected, and the owner commended for the general improvement apparent, as well as the promising condition of his clover, winter oats and wheat.

After dinner a discussion arose as to the origin of the "Norton seedling grape," which was elicited upon reading to the club, by Maj. Harvie, of the accompanying communication from Dr. Palmer. The view there taken of the origin of this grape was combatted and claimed to be incorrect by Drs. Pollard, Beattie, Mr. Johnston and others, who expressed the sense of the club that while this communication was of an interesting character, it did not give the correct information as to the origin of that vine.

Your reporter could not be present during the entire discussion add Dr. Pollard promises to furnish to your journal the theory entertained of the origin of this important grape.

The May meeting of this club was held at "Sunnyside," the residence of Maj. Vaughan.

The farm being first inspected, the crops and garden were declared to be in good condition. The wheat promising and the Irish potatoes particularly good.

After dinner, the Committee on Constitution and by-laws reported, and their report unanimously adopted.

The corn crop and its culture then engaging the attention of the club.

Dr. Perkins, by request, read to the club some notes prepared by him on the subject of the "*Cultivation of corn*," only. This essay was incomplete and in the form of notes to elaborate. But the club deemed the views given as of value as a practical treatise on this "Cultivation," and I herewith send the same to you.

The necessity of proper distance to afford ventilation and the sun for this crop was discussed, and especial attention was called to the "thinning" and removing the suckers by the root. The two stalks in a hill where the land will admit of it, or two in every other hill, was recommended, particularly having in view a plentiful supply of the all important "pollen" was referred to by Dr. Beattie and others.

The resolution offered by your reporter as to the improving and cleansing of our lands by the use of the black or "fallow pea," and as to the mode of seeding so as to produce the best results as a manure was adopted for discussion at our next meeting, and a committee consisting of Dr. Beattie, Dr. Perkins and J. A. Lynham appointed to prepare an essay on that subject.

We have frequent informal discussions as to the "Granges," which is fast increasing in popularity and interest with us.

Yours &c.,

REPORTER.

[For the Southern Planter and Farmer.]

TUCKAHOE FARMERS' CLUB—APRIL MEETING.

The club assembled at the handsome residence of Mr. J. A. Lynham, where they were most hospitably and bountifully entertained.

Among the proceedings of the meeting was the reading of a letter from Dr. Wm. P. Palmer on the origin of the "Norton seedling grape," which is here appended. * * *

After the reading of the letter Dr. Beattie remarked that he had examined carefully the fruit of the vine at Gen. Johnston's, and was convinced that it was not the "Norton seedling grape."

Dr. Pollard remarked that this grape was generally believed now not to be a seedling, but that it was a native of the county of Hanover, saying such was Gen. W. H. Richardson's statement some time since to the club, the General asserting he had frequently seen the vine near Powhite, Hanover, from which the Norton seedling was propagated. In further confirmation of this, Dr. Pollard remarked that a grape was occasionally brought to the Second Market in Richmond, which was scarcely distinguishable from the cultivated Norton.

A discussion then ensued on "Machinery in Farming." Several members agreed in the opinion that for machinery to be used to advantage on the farm, that it should be managed by skilled and experienced labor.

Dr. Beattie spoke of "Thomas' smoothing harrow," which he used, and praised it very highly.

Mr. Channing Robinson remarked that with eight cradlers he could do the work of any wheat reaper, and believed this the most economical plan of harvesting wheat.

The corn planter was spoken of, but not commended, except on well prepared land and large farms.

An incidental discussion then followed on corn culture.

Dr. Beattie preferred the level culture.

Dr. Crenshaw recommended the old system of mold board culture, and said that the old Veteran Virginia Farmer, Hill Carter, preferred this to any other plan, and had discarded the shovel plow.

Corn Culture was then adopted for next meeting.

P.

[For the Southern Planter and Farmer.]

CUTTING, CURING AND STORING HAYS.

The time is at hand when such of our farmers as are fortunate enough to have meadows, either of clover or the more permanent grasses, will have the pleasant, yet laborious duty of cutting and storing the hay to attend to. Having had considerable experience in the management of hay, we give it for the benefit of such of our readers as are just attempting the management of their first crop. We are happy to say that there are very many individuals who though farmers of many years' standing, have never attempted

the raising of hay, who this year have some to cut, and we consider it one of the surest, as it is one of the most potent evidences of improvement, that almost every farmer has a small patch at least of clover or grass.

Clover should be cut as soon as the earlier blooms begin to turn brown. If growing alone, and the crop is heavy and there is a great deal to cut in proportion to the available force, it is better to commence earlier—say when the bloom is brightest. If it can be had, a mowing machine should always do the cutting. In point of economy it may be safely averred that a ton of heavy clover can be cut by a machine for about one-third what it would cost to cut it with a scythe, and if the ground is in proper condition from one-eighth to one-sixth more hay will be obtained. The machine in cutting leaves the clover nicely scattered in the best possible condition for curing; thus saving the immense amount of labor involved in scattering it and turning in the swathe when cut by hand. Clover should never be cut when damp with dew or rain, and if this precaution is observed it will require very little time to fit it for storing.

The machine should start at 9 o'clock A. M. if clear, and by 2 o'clock the rake may follow, putting the hay in windrows. If it continues fair and dry, and especially if a brisk breeze be stirring the grass cut one morning may be safely stored the next evening. The horse rake should be invariably used instead of the hand, and unless bad weather intervenes, or it is desirable to leave the hay in the field for several days it should not be put in cocks. In curing clover alone it is important to watch and turn it, or gather it into windrows before the leaves become scorched by the sun. In very bright, still weather this will frequently occur in two or three hours after cutting. It is very important that no rain should fall upon clover after the process of curing has commenced, and to avoid this we have upon several occasions stored considerable quantities the same day it was cut. In cases of this kind we are careful to distribute the hay as evenly and lightly as possible over the entire mow and apply two quarts of air slaked lime and one quart of salt to each ton of grass, sowing it over it as evenly as possible. We have never lost any hay thus treated. Upon the contrary, we have usually found it sweeter, or at any rate more relished by stock than any other.

Clover hay should never be stacked out unless there is straw or long grass at hand to cover it and protect it from the weather. Some persons add considerably to the bulk of their clover hay by storing it in alternate layers of a foot or two in thickness. If this is done, the clover may be put away quite green, the dry straw absorbing the surplus moisture and becoming impregnated with the juices of the clover and being much more relished by cattle than when not so treated.

Immediately after the clover harvest comes that of timothy. If this grass has been sown alone it will not be difficult to cure. We usually let it lie twenty-four hours after cutting if the weather is favorable and then put in medium size cocks where it may remain several days or even longer before being hauled in. When ready to store or stack it, the cocks should be opened and the bottom

exposed to the sun an hour or two. Pure timothy can be readily stacked to keep, but we prefer, when practicable, to put hay of every kind under shelter. It should always be remembered when cutting timothy that there is a small bulb formed upon the stalk an inch or two and sometimes even three inches above the surface, which should not be cut, as it contains provisions for the next growth, and if cut off the entire plant will be very much weakened, if not killed. It is therefore best not to cut this grass so close as orchard grass or clover, may be cut with impunity.

The best time to cut timothy, in our opinions, is directly it sheds the bloom, or when the larger part of the heads are in what wheat-growers call the dough. If intended for food for milch cows or young cattle or sheep, it is perhaps better to anticipate this period a few days, cutting when in full bloom. If, however, it is intended for food for horses it may even be riper still, many experienced horsemen preferring hay, the seed of which are mature, for feeding horses that labor. We confess our own experience is not by any means conclusive on this point, the condition in which the hay is saved making more difference than its degree of ripeness when cut.

For all stock, except horses, intended for hard or fast work we prefer well cured clover hay to timothy, and the manure from one ton of clover is worth double as much as from the same quantity of timothy, an item which should not be lost sight of in the economy of the farm. Especially when the growing of clover enriches the ground even when the entire crop is removed, while timothy is an exhausting crop. We have before remarked that it is best to store all hay under shelter if possible. There are several good reasons for this. In the first place, the loss from wet and spoiling stacks is frequently sufficient to pay for the necessary shedding, and another advantage which every practical farmer and feeder will readily appreciate, is that you can store any quantity at a time from a load to a dozen loads. When stacking out farmers frequently lose an opportunity of having several loads, when the weather is threatening and there is danger of the stock being caught before finishing; this difficulty may be avoided to some extent by having at hand a large tarpaulin to throw over unfinished stacks in case of rain. Another advantage is that any quantity may be taken out for feeding purposes without leaving the rest exposed. The sheds for the protection of hay need not be expensive. One sufficiently large to store thirty tons we had built for fifty dollars, expenses all told. With the assistance of the ordinary farm labor, it would cost even less than this. Good, strong oak or cedar posts, four feet in the ground and sixteen feet above it, with a plain roof is all that is absolutely necessary.

A few old rails make a very good bottom to put hay upon, and a little care will make the sides shed all the wet that beats in upon them. When hay is a specialty and largely made for market purposes a shed should be provided for baling for market purposes. Timothy is preferred to any other grass, and it may be permitted to ripen more thoroughly than when intended for home consumption. It sells equally as well and weighs heavier.

AMERICAN MANURES AND FARMERS' AND PLANTERS' GUIDE.

(American Chemist.)

Comprising a Description of the Elements and Composition of Plants and Soils, the Theory and Practice of Composting, the Value of Stable Manure and Waste Products, etc., etc., etc. Also Chemical Analysis of the Principal Manufactured Fertilizers, their Assumed and Real Value, and a Full Expose of the Frauds Practiced Upon Purchasers. By James Bennet Chynoweth, late Superintendent of Baugh & Sons' Fertilizer Manufactories, Philadelphia and Chicago, and Wm. H. Bruckner, Ph. D., Analytical and Consulting Chemist. Philadelphia, Chynoweth & Co., 1871.

From the above specious title, the reader might suppose this book to have been written with a sincere desire to impart information to planters and farmers, and to instruct them in those essential principles of agricultural chemistry, which are so important in their application to the operations of the farm. A very different object, however, appears to have animated the authors. The first few chapters, indeed, seem intended to elucidate the chemical theories of manures and their effects, but the information thus conveyed, is totally devoid of originality, and meagre in the extreme; and serves merely as an introduction to the main part of the work, which consists of a violent attack on American commercial fertilizers as a class, in which individual manufacturers—some of them of eminent respectability—are fully aspersed, and the products, by imperfect and garbled analysis and are arrogant assumptions, are rated at prices far below their actual worth.

The methods of estimating the money value of commercial manures, are arbitrary in the extreme. No allowance is made for fluctuations in the price of raw materials, or for labor, for wear and tear of apparatus, or the many other sources of expense incident to the business. Manufacturers have many just grounds of complaint at the summary way in which self-elected censors assume their product to be worth certain prices. Reasonable chemists, while using these valuations simply for purposes of comparison, admit that they are no real criteria as to their actual money value; and agree that it is unjust to enforce such assumptions. The authors of this book, with an effrontery which would be amusing, were it not offensive to good taste, reject the more liberal valuations of such eminent chemists as Avery, Stockhardt, Voelcker, Johnson and others, calling them "simply ridiculous," and state they "shall proceed to estimate from a different basis." This "basis" seems to have been selected for the express purpose of assailing well-known manures, and villifying reputable manufacturers. By the "basis" thus arbitrarily assumed, insoluble phosphoric acid is declared to be worthless, and in the tables of analytical results of the fertilizers which the authors examined, the only ingredients to which any value is assigned, are soluble phosphoric acid, ammonia [potential and actual] and potash. In this view of the case, the value of pure ground bone would be

estimated simply from its percentage of nitrogen, leaving the phosphoric acid wholly out of consideration, which is a manifest injustice. As chemical analysis can merely estimate the *quantity* of insoluble phosphoric acid in fertilizers, without positively indicating its source, whether from bones, bone ash, or mineral phosphates, it must be clear to any reasonable mind, that to make a sweeping assertion that it is entirely valueless, is an unwarrantable presumption. Moreover, the phosphoric acid which naturally exists in soils, invariably occurs in its insoluble form, in which condition it is available for plants.

The opinion prevails among the most eminent agricultural chemists, that soil analysis are of no practical benefit to the farmer, except, perhaps, in certain instances where abnormal results are observed. The authors of this book, on the contrary, assume that soils should be analyzed, "so that the farmer may know the amount of fertilizing substances he has on hand. This would be analogous to taking an account of stock by the merchant or manufacturer, only it need not be done so often." They likewise make the remarkable assertion that the price of farming lands should be rated by their composition! This brilliant idea would introduce a new element into the business of buying and selling farms; and in the event of its being accepted, the novel spectacle may be witnessed, of real estate agents appending analysis of soils to their descriptive advertisements of lands placed on their registers.

The methods of analysis which the authors used in their examination of fertilizers are crude and faulty; and while they are open to grave objections on this score, they are exposed to the suspicion that more accurate results were not desired, as they would not, perhaps, have afforded the opportunity—apparently so earnestly relished—of indulging in the intemperate language they have employed. Honest criticisms may be severe, and yet be free from calumny. When it degenerates into personal invective, it loses much of its force, and leads to suspicions that other motives than those professed, inspire the detractor. The authors of this book have attempted to produce a sensation by publishing a defamatory work, under the flimsy pretext of offering valuable advice to farmers. They have succeeded in at least a part of their endeavors by issuing a volume which renders them liable to prosecution for libel, and which cannot be read by any chemist without regret that one claiming to belong to the profession should assume the sponsorship of such a diatribe.

MISTAKES IN WHEAT GROWING.

Most farmers aspire to raise wheat. It is the great staple crop of the country. There is sure to be a market for it. A man feels prouder over a good yield of wheat than he does over any other farm product, without it be a fat Short-horn steer, of mammoth size, concerning which he can say that he both bred and fed it. But while most farmers have an ambition to grow wheat, only here

and there one really knows how to do it; and there is, perhaps, no crop grown in the country, which so often disappoints the hopes of the husbandman. In the majority of cases, this is the result of mistakes which may be corrected and avoided.

A very common mistake is that of supposing that any sort of land will grow wheat. There are adaptations of soil which ought to be carefully studied, so that each variety may be devoted to such purposes as best suit it. While most farm products have a faculty of accommodating themselves to circumstances, and will grow after a fashion, anywhere, it will pay to make everything as favorable as possible to their best development. In selecting a piece of ground for wheat, the two extremes of light sand and stiff clay should be avoided, and a good strong loam chosen. A clay loam is better than a sandy loam. Province has given us abundance of the very best wheat-land in the world, but there are soils not so well adapted for it, whereon other products should be cultivated. Why fight nature when it is easier and better to act in harmony with her provisions and laws?

Another and most grievous mistake is attempting to grow wheat on poor land, land that has been exhausted by hard cropping. To grow this grain to the best advantage, even a suitable soil requires to be in a state of fertility. There should be abundant stores of both mineral and organic plant-food in it, and that too in an elaborated state, readily availing for use. The soil should be mellow and well-pulverized, even the manures that are applied being reduced to the greatest possible fineness. This is best secured by letting it follow a root crop. In a well-managed rotation, the place of wheat is next after roots. Nothing so completely mellowes land, and so fines down manure, as thorough culture of a root crop. In this way, too, the land is cleaned of weeds, an important pre-requisite for wheat growing. The root crop is to be heavily manured. Both turnips and wheat will show the good effects of it. So also will the succeeding yield of grass, for wheat is an excellent plant for seeding down with, and as it should be preceded by roots, it should be followed by grass. Wheat is an exhaustive crop, the most so of any crop grown on the farm, and it is the height of folly to sow it on poor land. A large proportion of the disappointments connected with wheat culture may be traced to this cause.

Insufficient preparation of the soil is a very common mistake in wheat growing. To obtain the best results, wheat ground should be well drained. It will not flourish on wet land. If there is stagnant water about the roots, the tissues of the plant become soft and watery, and though there may be a great show of straw, there will be but a small yield of grain. If tile-draining cannot be accomplished, the next best thing is to loosen the subsoil with a subsoil plow. Many farmers hardly know the name or use of this implement—the more's the pity. The subsoil plow follows in the furrow made by the common plow, not making a second furrow, but loosening and tearing up the hard pan, so that it will be light and open, admitting air, and giving free passage to moisture, in exhalation upwards, and in drainage downwards. When land is summer-fallowed for wheat, every effort should be made by

repeated use of the harrow or cultivator, to destroy weeds and to keep the soil mellow and friable. It should be ploughed in May to the depth of about eight inches, and the subsoil plow run down six or eight inches deeper. During the summer, an occasional harrowing or cultivating should be resorted to as a means of eradicating weeds. Then just before the time for sowing, the land should be re-ploughed with both common and subsoil plows. Let those who think this "over-doing it," fairly try the experiment of thorough cultivation and see whether the results do not prove that *it pays*.

It is a mistake in wheat culture to bury the fertilizing material deeply in the ground. We have known great pains taken to do this, and the consequence has been sad disappointment. The wheat plant inclines to spread out its roots horizontally near the surface of the ground, and that is where it should find a supply of nutriment ready for use. If the food of the young plant is deeply buried, its roots must alter their natural course and strike downward instead of spreading abroad near the surface. This is, no doubt, one of the chief causes of winter killing. The roots are torn and broken by the alternate processes of freezing and thawing. When the roots of the growing grain spread out horizontally near the surface, the expansion and contraction caused by freezing and thawing affect the whole plant, heaving it bodily and letting it settle altogether, whereas when the roots are obliged to strike down deeply in search of nutriment, the changes of weather are felt only by that portion of the plant which is near the surface. The lower portion of the plant remaining firmly imbedded in the ground, when the top soil undergoes upheaval, the obvious result is destruction to part of the roots and the consequent weakening of the plant. It is well known that the best crops of wheat are grown on new land. The trees have just been chopped down, burnt, and the ashes distributed over the surface of the ground. In addition to this fertilizing material, there is the leaf-mould, which contains an accumulation of choice plant food. It is impossible to plough the ground, because it is full of green, tough roots of trees. Hence the seed is "dragged in," *i. e.*, harrowed with an imperfect surface scratching. The roots of the wheat plant can follow their natural inclination under such circumstances, and spread out close to the surface of the soil which is richly stored with the best possible food. Have we not here plain proof that in order to successful wheat culture our fertilizers must be distributed at or near the surface of the soil? This is no argument for shallow ploughing. Stir the soil deeply, but let its treasures of plant food be near the top.

Broad-cast sowing is a mistake made by many. Drill-sowing is more economical, saving seed by its more uniform distribution, and lessening the liability of the young plants to winter-kill. There is a better and more even distribution of light and heat, and freer circulation of air,—important considerations in connection with the best welfare of the crop. It is not the least of the advantages of the drill-sowing, that a little concentrated manure may be applied in the drill, the influence of which will be felt in hastening forward and strengthening the young plants.

It is a mistake in wheat culture to sow inferior seed. Indeed this is very foolish in regard to any and every crop. Like begets like. Weakness and disease are propagated in the plant world, very much as they are transmitted from parent to child in the world of human beings. The greatest pains should be taken to procure the choicest seed that can possibly be had. It will pay a farmer who depends on his own growing of seed, to cull out the best portions of a field, when there is perceptible difference, and devote them to this important use. Indeed it is a wise policy to select the earliest and finest heads, and from these grow seed. It is also well to obtain a change of seed from time to time, as successive sowing in the same soil and climate, seems to induce more or less degeneracy. The farmer should never grudge a little extra outlay in the purchase of choice seed. Such outlay is pretty certain to be well rewarded.

We have not enumerated all the mistakes that are made in wheat culture, but these will suffice for the present article, and others can be taken up hereafter.—*Cincinnati Farmer*.

Horticultural Department.

MULCHING, WATERING, AND PRUNING TREES.

A recent article in the *New York Sun* presented the results of my experience in mulching and watering, in so much better form than I can give it myself, that I laid aside the paper with the intention of sending it to you, and requesting the republication of the article in question. But, having mislaid the paper, were it merely by way of penance for my neglect, I will offer my testimony for what it is worth.

And I will state at the outset, I don't think I ever saved a tree by watering. Certainly, I have lost a good many which I watered most assiduously. The *Sun* writer attributes this to the baking of the soil about the roots, and this seems the most satisfactory explanation. Yet I have sometimes kept the ground always moist, and still lost my trees. I suspect I commenced watering too late, and that the trees had already begun to decline, although it was not yet perceptible. Still, the effect must be to strengthen yet more the conclusion against watering at the root.

On the other hand, with mulching there is no such word as fail. I have transplanted small trees in full leaf successfully, by removing most of the branches and foliage, watering when planted, mulching, and then moistening the mulch, and the top of the tree occasionally. An occasional sprinkling of the boughs and body

of young trees during dry spells in spring has the happiest effect in starting the sap and buds.

A few years ago I planted fifty apple trees in March, and tested the comparative advantages of mulching and cultivation. With the most thorough cultivation and high manuring I secured, on a portion of the trees, a growth of from one to two feet. The remaining trees, planted in a lot sown in oats, moderately manured, well mulched, and left undisturbed throughout the year, grew from two to four feet, and are ahead to this day.

Trees are oftener pruned too much than too little. Low heads suit the intense heats of our summers.

Peach trees may be cut down to the ground, and grown somewhat like shrubs, with from three to five stems. By this method, you will have no splitting off of overloaded branches; you can cultivate close to the tree; you escape the evil of a scaly, hide-bound, sun-baked trunk, and you may, from time to time, cut away one or more old stems, and have them replaced by new and vigorous ones, as in a rose bush.

Try this plan on a few trees, and you will be likely to keep it up. Of course it is not every tree that admits of it, but simply the youngest.

Another advantage—it greatly facilitates the gathering of the fruit.

L.

RICHMOND, APRIL 20TH, 1874.

MAJOR JOHN B. HARVIE, JR.:

Dear Sir—I promised to give you the account I have frequently heard from my late father's lips (Mr. Charles Palmer) of the origin of what is known as the "Norton Seedling Grape-vine." It is as follows: Soon after Mr. Monroe's return from France, he occupied the house on Franklin street, now owned by Mrs. Bayly. While living there, he made a gift to my aunt, Mrs. Price, of a Burgundy grape-vine root, which she planted in the garden of the residence now owned and occupied by Gen'l Bradley T. Johnson. From early childhood I recollect that vine. At one time it was very large, growing from two canes as large as a man's arm, and never failed to bear profusely. It was often broken down, and was once burnt down almost entirely. But it was never killed: it seemed to have more than "nine lives." When the property passed from my hands into those of Gen'l Johnson, I told him the history of this vine; whereupon he at once took steps to perpetuate it. And now he has it supported upon an arbor, having first trimmed out all the old dead wood.

I have often heard my father say that Dr. Norton got from this vine the grafts which he used upon the wild native vine of this State in the neighborhood of Richmond, and which originated the "Norton Seedling." This fact I hear is also known to Mr.

Jessee Williams, the father of Mr. A. D. Williams of the firm of Grubbs & Williams. Whether it be true or not—the characteristics of the two varieties of fruit, viz: the fruit of the old vine and that of the “Norton Seedling” are very much alike, so much so, that it is almost impossible to distinguish the one from the other. They bear alike, they ripen alike, they taste alike, they are hardy alike—cannot be propagated except from the root: flourish in rich, moist spots; produce a dark, slightly astringent juice or wine, cannot recommend as a table grape, but now considered the safest for wine. I give you this statement, as I have often heard it, but of course cannot vouch for its accuracy. It is well worth further investigation. It is enough to say, that the old vine to which I refer has been where it now flourishes for more than sixty years, and is now a “merry old plant.”

Very respectfully and truly yours,

WM. P. PALMER.

[For the Southern Planter and Farmer.]

PEAR CULTURE FOR PROFIT.

A very practical work with above title has just been issued by Orange Judd & Co., of New York. A former edition of the same work was published some years ago by the *Tribune* association we believe, and the author, General P. T. Quinn, of New Jersey, has revised and added to it, and it now comes out under the care of this great agricultural publishing house. The author is perhaps as thoroughly competent as any one man in the country to write such a book. For many years a practical cultivator of the pear, and withal a thorough-going fruit-raiser, he deals only in facts and experience. The book before us contains very little theory; and while we do not agree with the author in many particulars, we cannot but commend the plain, common-sense manner in which he treats his subject; so different from many writers who seek to bewilder rather than inform, and who advise so many and such heavy out-lays of money and labor as absolutely necessary to success in pear culture that most ordinary farmers are deterred from engaging in it. Mr. Quinn is decidedly opposed to the planting of dwarf pears, except one variety—the Duchess. Here we think him wrong. It is true that there are comparatively few varieties which do well as dwarfs, if kept so; but by planting the point of union between the pear and quince three or four inches below the surface the pear stock will soon throw out roots and become a standard, to all intents and purposes, retaining at the same time all the advantages of the dwarf—early bearing and productiveness. Though not an extensive grower, we have had an experience dating back to '61; and we are now planting a young pear orchard of 1000 trees, one-half of which will be

dwarfs. Our reasons for this are simply these: The original cost of the trees is about one-half for dwarfs what standards cost—the one \$25 per hundred, the other \$50. Secondly, in transplanting dwarfs are much less liable to die than standards, and are not so much checked in their growth. Thirdly, the dwarfs will bear at least two years earlier than the standard, and even a half-peck of first-class fruit from each of 500 trees will bring a considerable sum for a poor man. Fourthly, by planting the trees deeply the pear stock will soon take root, and at the end of ten years our orchards will all be standards.

Mr. Quinn recommends very few varieties of pears, and we are disposed to agree with him in every particular on this subject. There is a great disposition among tree planters to multiply varieties upon their grounds; and the result is the planting of many that are utterly worthless, and having so few ripening at a time that they will not pay to take to market.

We wish we had space to copy whole chapters of this work for the benefit of our readers, especially those upon planting, manuring, pruning, &c. As the season for planting approaches, however, we will try and make such extracts as we deem of most general practical interest. Every man, however, who pretends to raise fruit—especially pears—should have the book itself.

ASST. EDITOR.

Stock Department.

[For the Southern Planter and Farmer.]

THE BEST BREED OF CATTLE FOR VIRGINIA.

Editors Southern Planter and Farmer:

The raising of cattle has now become a source of profit in many sections to a great extent, and it becomes a matter of great practical importance to our farmers to select the breed best adapted to the locality in which they reside. The question is asked every day. Which is the best breed, and where the best crosses?

The time has passed away when the intelligent practical farmer will be willing to put his cows to a "scrub" of a bull simply because his services can be had gratis. The calf of a blooded bull is worth more for any purpose than one from a "scrub." Blood has a money value which will be appreciated. I think the best breed of cattle for Piedmont and Eastern Virginia is the Devon crossed on our native stock; they will give more and richer milk, and will make better beef than any other stock that I know of, and at the same time they are hardy and will make the quickest and best work-oxen in the world. They will winter on one-third

less than the short-horn or Alderney. Stock raisers should use more judgment in selecting such heifer calves as are to be reared. Select those whose mothers are good milkers and whose sires have come from good milking stock; at the same time the calf itself should have those characteristics that indicate an aptitude to develop good milking qualities—viz: small fine head, rather long in muzzle, bright eyes, thin tapering neck, small well-shaped legs, long body, large hind quarters, soft skin, fine hair, the milk-mirror or udder-veins should be large and well developed. The raising of bull-calves for breeders had better be left to those who have time and means to devote to it. But there is no reason why a portion of the male calves at least should not be reared as bullocks, either for team or butcher; and it is important that such as are reared for this purpose should possess certain points indicative of future excellence—viz: well-shaped head, small ears, short thick neck, deep brisket, broad chest and shoulders, fine bone, long body, well rounded behind the shoulder, straight back, wide loins, full quarters, tail thin and tapering, skin soft and not too thin.

It is too often the case that animals are selected for breeding from their being of a pretty color. Not unfrequently valuable calves are fattened for veals simply because their color is unpleasant to the eye. The near approach of spring suggests many questions of importance in regard to the care of stock, to get them to summer in such a condition that none of the year's growth will be lost. Cows that come in at this season of the year need special care, or they will not yield through the season the expected profits.

Food amounting in nutritive qualities to an equivalent of milk secreted must be given, or there will be a draft upon the system, reducing flesh and strength, and so checking the constitution that full recovery will not be made during the entire season. Ground feed, or vegetables with plenty of pure water, are indispensable. Cold storm of rain and sleet are not uncommon near the opening of spring—at a time when feed is likely to become reduced in quantity.

The sheds and other buildings must not be allowed to get out of repair; for stock may be so much reduced in flesh, that they cannot endure these severe seasons without sacrifice.

Good cows have three important qualities—viz: They give rich milk, yield it in large quantities, and hold out well through the year. It is not the quantity given, but the quantity profitably given, which determines the value of a cow; a good milker does not, in my judgment, constitute a good cow; neither does a good breeder, nor a good feeder; it is the three qualities combined that make the cow. Cows of extraordinary milking properties are found as often among grades as among thorough-bred animals. The greatest milker that I have ever known is a grade Devon. She will yield four gallons of excellent milk at a milking, namely, twice a day, making an aggregate of eight gallons per day. C.

[For the Southern Planter and Farmer.]

DOG TAX, SHEEP RAISING, &c.

The relationship that has existed between the *man* and dog creation from a very remote period, is a peculiar one. "Love me, love my dog," is a phrase we are all acquainted with, and many of us, perhaps, have witnessed a fight or two between *men* about their dogs. We find also, by reference to the Old Testament, that the Israelites were prohibited by special enactment from making dogs a matter of commerce.

A good dog, whether he be kept specially for the chase or sport, in the fields or only as a yard dog, is a valuable animal, and it is just here that the *peculiarity* of his position towards man is most striking, or is it man's position towards the dog? While we are willing to quarrel about them, nay, sometimes actually fight about them, yet we permit them to roam about the country at will, absolutely without protection so far as the law is concerned, and scarcely regarding the improvement of their species at all.

And in the meantime an interest of high importance to the whole country suffers severely from the *no-law* system of dogs. I refer to sheep-raising, which is entirely prohibited in some sections, and carried on in others with the profits arising from that lucrative and *important* branch of industry sadly diminished by the loose morals of the neighborhood dogs. Especially is this the case around our cities and towns and villages, where, on the smaller but richer and better provided farms, those larger and finer breeds of sheep are most likely to obtain a foot-hold—from thence to be distributed among our flocks in the mountains and on the plains beyond us. But this will never be the case as long as our people suffer the dogs to kill the sheep with impunity, and the best remedy is a tax *per capita*, say of 25, 50 or \$1.00 for the first dog, double the tax for the second, and \$5.00 for each dog more than two kept on one farm or lot; for females, double the tax on males. Then require their owners to *muzzle* them securely against damage to persons and property, and that they shall be kept muzzled or confined at all times, and I think we will have the dog matter safely and satisfactorily arranged for the good of the dogs, as well as their owners; and the difficulty (so far as they are concerned, at least,) about raising sheep removed.

The money arising from this tax on dogs I would appropriate to extending our school facilities or improving our county roads, or both, as the revenue from this source would probably be sufficient.

I have seen much opposition offered by the people to the *feeble efforts* of our legislators hitherto made for taxing dogs; but I believe it was the spirit animating those who favored the plan, or at least their manner of presenting it, rather than any well-con-

sidered reason on the part of the people for opposing, which caused its failure: just as we see people opposing the law requiring them to fence in their cattle from the highways and their neighbors' crops. This, as well as the dog tax which we may yet hope to obtain from our Legislature as something at least in the line of "value received" for the enormous cost of their "sitting," are both innovations on a time-honored custom, which in the days gone by I am told made law, and will be opposed just as the introduction of labor-saving machinery was, and upon very like grounds. The man who attempts to argue in favor of allowing cattle to run at large by law, argues at the same time *in favor* of the proposition that *an indifferent cow or hog is better than a good one*, which is simply ridiculous; and he who opposes taxing dogs for the purposes named, surely holds that his dogs are more important than the education of his children and improved highways, or confesses to the sin of feeding away bread from the mouths of hungry women and children to a parcel of worthless dogs, not worth paying taxes on.

No, Mr. Editor, I feel assured that a wholesome law passed by our Legislature taxing dogs, and protecting them from being harmed by others or each other, and preventing their doing harm to people and property, would be hailed with delight by all; and those aspirants for higher places may vote for such a law with perfect impunity; there need be no fear of its detracting from their majority for Congress, Governor, or President of the United States, or what is better, a great railroad corporation monopoly a single vote.

[For the Southern Planter and Farmer.]

BEES.

Messrs. Editors:

As you have published various articles on the subject of bees from my pen year before last, and I now have frequent letters asking why I do not continue to write for your journal, I thought I would run off a short article.

I the past month moved my family to the city of Richmond, and with them brought ten swarms of bees in Triumph and American hives, fearing to bring more. I left twenty-two swarms with the tenant on the farm I moved from, and placed ten swarms on another farm about four miles from town, which is all the bees I have left after having sold off near twenty swarms this spring at prices ranging from \$7 to \$16 for swarm and hive and honey in the hive, the prices varying according to the kind of hive and bee. I sold to one gentleman over \$60 worth. So your readers

can see there is money in raising bees if you throw away the honey; but I consider the honey far the most profitable part of the business, if it is properly attended to.

Having these ten hives of bees in the city I propose reporting, from time to time, their history as to number of swarms and yield of honey; for I am inclined to think bees on a large scale in a city uncertain, although I must say they have commenced unusually well; for I have already (May 9th) had seven Italian swarms from the eight Italian swarms I brought in—as follows: April 22d, one Italian swarm; April 27th, two swarms; May 1st, one swarm; May 7th, one; and May 9th, two; which is very good for eight hives so early in the season, when last year I did not have the first swarm until May 1st; and in 1872 my first natural swarm was not thrown off until May 13th. My two apiaries in the country have also had a number of Italian swarms already, while none of my black or common bees have yet thrown off a swarm; so it proves conclusively, from three years' experience, that the Italian bee throws off earlier swarms than the common bee, which is another advantage the Italian bee has over the common bee; and my experience is, they gather much more honey, and protect themselves much better from moth-worm, and they are a much handsomer bee to look at, with their golden bands, as well as being much more docile, or not so much inclined to make an attack when you pass amongst the hives or open them to extract the honey, or otherwise manipulate with them. They also do not so quickly leave a sheet of comb when you lift a frame of comb or young brood from the hive. The queen being of a golden or leather color, is much easier found.

I am now, after over three years' trial of some ten or twelve different kinds of hive, using the *Triumph hive*, and a modification of it and the *Simplicity hive*. The frames in the hive I am using most are deeper than either the *Triumph* or the *Simplicity*, but the same length on top as the *Triumph*; and without division boards or surplus boxes I can sell them for three dollars and fifty cents each, which makes them a very cheap hive. The *Simplicity* hive, with thirteen frames and without bottom or surplus boxes, I can sell for three dollars each. This last named hive is so made that the top of one hive will answer for the bottom or the top of any other hive of the *Simplicity* pattern; and when one hive is full you simply set another hive either over the full one or under it, as your judgment may decide best; and if the swarm is very large and gathering much honey, you may set three or more of these hives one over the other, and the bees will work in all. In that way I think it is an advantage to have no fixed bottom or top. I find, by experience, a little quilt to fit the hive nicely over the top of the frames is a great convenience, and much to be preferred to a plank or wooden honey-board; for when you cover up the bees you do not kill any, as a wooden honey-board would, and it lets the dampness evaporate, yet it is sufficiently warm for

winter or summer. With Triumph hive you can ventilate the hive as thoroughly as you desire.

This communication is somewhat scattering, but it replies to numerous letters of inquiry, and will save me some letter-writing.

I must close for the present, with best wishes for the success of your journal. Respectfully yours,

May 11th, 1874.

W. R. POLK.

Correspondence.

[For the Southern Planter and Farmer.]

MAY NUMBER OF THE SOUTHERN PLANTER AND FARMER.

Before resuming our review we wish to say that the May number of the *PLANTER* we consider to be an excellent one. If some Southern farmer were to find in a Northern agricultural journal the same amount of valuable, practical matter, with the plates and embellishments which usually accompany these journals, we believe he would pronounce this Northern periodical one of the best (if not the best) farmers' paper in the whole country. The writer takes and reads several Northern agricultural journals, and is conscious that he derives more useful information from the *SOUTHERN PLANTER* than from any or all of them. We believe it literally true that every farmer in Virginia should take the *SOUTHERN PLANTER*. What is \$1.50 in comparison with the information he would obtain by reading it?

This much we feel to be due to one Virginia journal, and is said by one who has no pecuniary or other interest in it, except to see merit rewarded and Southern enterprise successful. What is said in these reviews is paid for in no manner or form, the writer only desiring to add his mite in building up and sustaining a valuable Southern agricultural journal.

The first article in the May number puts forward the encouraging belief that agriculture in Virginia is decidedly improving, and expresses the opinion that Northern farmers who come to the State fail of their expected success because their soil, climate, and system of labor are totally different from that they meet with here. We suspect this is true. But the Northern man, the writer says, is far ahead of us in *system*. This is very manifest, and this system which is not characteristic of the Southern farmer is all important. We have been often struck with the want of system on our Southern farms in the one particular of not having "a place for every thing, and every thing in its place." How often

do we hear the saying of "where this thing or that thing is;" and much valuable time is lost in hunting up things which are kept in no particular place.

The "Virginia Water Line," which if completed would be one of the greatest works of the age, and the most important work of internal improvement on the continent, is destined still to wait for aid by the general government, and for the present "hope is deferred." If this great canal were to wash Northern territory an appropriation would not long be doubtful.

"Mixed Farming" and the cultivation of grasses is again very properly urged upon our farmers. The cultivation of grasses and the pea-fallow are all important to Virginia farmers in improving their lands.

"The Currency" contains some interesting statistics, and shows how far we are behind most other nations in the amount of currency per capita, and is an argument in favor of increase of our currency, or "inflation," as the opponents call it. The paper contains many other practical statements, is quite detailed and perspicuous, and needs no analysis at our hands.

In "Notes for the Month" the writer says he would prefer to plough his land the first time at least "*three weeks before planting.*" This depends on the soil. In heavy clay lands we prefer to plough four or five months, or the fall before planting. This gives opportunity for the freezes to pulverize and make friable the soil, and, besides, expedites labor and enables the farmer to be beforehand, or in time, in the spring. The mode of cultivation is touched on, and the harrow after the corn is up, and then the cultivator or coalter is advised. Mr. Hill Carter, a standard authority in farming in Virginia, prefers the old system—the culture with the mould-board. It is the best system for killing the grass, and we doubt if any system will ever be desired for cultivation of corn better than this. On the cultivation of tobacco we are not prepared to speak, not being a raiser of "the weed."

The proceedings of the "Monaskon Farmers' Club" contain a practical article on sheep, and there we have a debate on the old question of "Dog vs. Sheep." We suppose as long as the owners of dogs can give more votes than the owners of sheep we shall have no tax on dogs and no abatement of this great evil.

The "King George Farmers' Club" take up the old cry of "Dogs vs. Sheep," and Mr. Fielding Lewis reports twenty-one sheep killed by dogs in four nights, and the killing of the curs—some satisfaction, but no pay for the lost sheep.

In the "Use of Straw" we are advised to apply it at once to the poorer portions of our lands. Good advice; but as much as is needed to keep the farmers' animals clean and comfortable, and to absorb the liquid manure, should be used in the stables and farm pens.

"Protective Legislation Against Frauds in Fertilizers" has very little point or practical suggestion in it. Legislation to this

end in this country has not been efficient. So states Hon. Fred. Watts, commissioner agriculture, and so we believe. But if the State was willing to incur the necessary expense much might be accomplished. To make the plan available to the farmer it would be necessary to have not only one "State chemist," but many chemists distributed through the State at different points. One chemist could not do a tithe of the work necessary; and besides, chemists should be situated in the different portions of the State, that the farmers might apply in person to them. Probably one for each Congressional district might suffice. We believe that Congress should make the appropriation for this purpose, on condition perhaps that the farmers' clubs and granges should aid in defraying the expenses. Agriculture being the great interest of the country, and constitutional difficulties being not much regarded in modern times, we see no objection to the plan—a plan somewhat similar to that used in Germany. In aid of this plan perhaps it might be well to charge each farmer who applies to the chemist for analysis a small fee. This, too, would prevent useless applications to the chemist.

"On the Proper Method of presenting Phosphoric Materials to the Soil," the question having arisen as to whether it was not better to use these materials in a finely ground state than dissolved by sulphuric acid, the testimony of Dr. Voeleker and M. Ville in favor of the use of the acid is adduced.

Next comes a very interesting letter (rather too long, however,) from Geo. C. Gilmer, of Albemarle, commending Virginia and his county to settlers. It is in reply to numerous inquiries on this point, and like this gentleman's other communications, is well and pleasantly written.

"Deep vs. Shallow Ploughing" contains a long extract from the "Ogden Farm Papers" on this subject. It appears to us the solution of this question is found in the variety of soils and the use of the sub-soil plough, which in common parlance "splits the difference." The latter gives us a deep soil, without any danger of upturning a bad sub-soil. Of the propriety of deep ploughing on land with a good red clay sub soil, no one doubts, after examining the effect of throwing down the batteries near the city and cultivating them. This has been done in some cases next the river, and on these levelled batteries are found the best clover, wheat, &c., though the sub-soil is alone on the surface, and the super-soil varied.

The writer of "Agriculture" gives us some good advice—viz: to use green manures (clover and peas), and lime and plaster. If this advice was followed there is no doubt that we should in a few years see decided improvement in the lands of Virginia—much more rapid than we shall ever see by the use of "commercial fertilizers."

Next we have some experiments on deep and shallow planting. The season of the year, and the dryness or wet of the weather

prevailing, has much to do in settling this question. The writer's experiments favor shallow planting.

The authority of William Thomas Meehan is adduced in the article on "Manuring Vines and Trees" in favor of using the manure in midsummer.

The writer of "What Stock Will Suit Us Best" advocates "sheep," and adduces some strong arguments in their favor. The trial of "goats" as a stock for farmers to raise is recommended. They will live on less than sheep or any other stock. Their hides are worth always \$1 a piece, the young kid is very eatable, the milk is good and nutritious, particularly for infants; and butter is by some made of the milk. They propagate very rapidly, are not attacked by dogs, and we think the farmers should give them a trial as a farm stock. The cashmere goat should undoubtedly be further tried in Virginia. The writer says they yield a fleece weighing from three to eight pounds, which sells in New York for \$1 to \$1.50 per pound.

Then we have an article on "Dogs vs. Sheep" again. This time from the pen of Mr. Geo. C. Gilmer, who not only discusses this subject, but "*Quibusdam alus.*" Can't the "granges" stretch out their briarian arms and help the farmers in this matter? But the trouble is, that every where the dogs outvote the sheep.

Then again we have more on this subject from F. G. Ruffin, with his plan of killing dogs, and his statement that sheep may be profitably raised in spite of the dogs; and that the casualties from the dogs is not greater than crops sustain by bad seasons, &c. But then to this must be added the diseases which sometimes pervade flocks of sheep, and the loss occasionally by rogues.

"Shepherd" wishes to know a remedy for killing ticks on sheep, and is informed that decoction of tobacco will do it. This may sometimes kill the sheep. We do not know it will, but we knew a cow once killed by it. The best remedy for insects of all kinds on animals is mercury in some form—mercurial ointment, or ointment of red precipitate; the latter is particularly efficacious for lice on hogs.

An article from Mr. R. P. Graves shows the profit of sheep raising. If the dogs could be gotten rid of there is no doubt that the business of sheep raising will increase yearly, and ultimately become a great interest in Virginia.

Then follows "How to Succeed With Poultry," from the standard author on this subject, Tegetmeir. Any thing practical on poultry is always important to the farmer; and we are convinced that the farmers are not paying the attention to this subject that it deserves.

Next we notice "Your Reviewer." "Henrico" seems in bad humor with "Reviewer," and appears to take counsel rather from a captious disposition than from reason. Why "Reviewer's" objections to the "Granges," honestly entertained and plainly stated, should be called "covert," is hard to conjecture. Is it a "covert

attack," because at the same time it is *hoped* and *believed* that the order will do good? Then one conscious that a friend or other person may have some defects may not wish him success in life. "Henrico" seems no believer in the line "With all thy faults I love thee still." The order must indeed be immaculate and infallible if one may not in a journal, where its claims are brought forward for popular approval, state objections honestly entertained by himself, and he knows many others, without having imputed to him insincerity and conceit. "Reviewer" sincerely *hoped* and *believed* the order would do good (for whatever benefits the farmer will benefit "Reviewer" as one of them), and has not made up his mind that he will never become a member of the Granges. The secrecy feature he could surmount; he is not certain he can the other. What is meant by bringing our wives into the "public arena" any reader can easily understand, though the mixing of females with the rougher sex in their meetings may not be as "public arena" as some others, and the expression may not be literally that. It is to be *hoped* that the order will put forward more politic and fairer-minded defenders of their principles than "Henrico," if they wish to gain adherents to their cause.

Other articles deserve comment, but we fear we have already consumed too much space in the PLANTER. REVIEWER.

ERATUM IN LAST NUMBER OF REVIEW.—In commenting on Mr. Price's article, for "*mortified*" patient, read "*moribund*."

[For the Southern Planter and Farmer.]

AMELIA PLANTATION OBSERVATIONS—THE TENDENCY TO RUN EVERYTHING AGROUND.

Whether consciously or unconsciously, there exists a universal tendency to run every new idea to death. When men get a new idea and successfully reduce it to practice, it becomes their universal panacea, and they seem oblivious to all other causes that have been and continue to operate. Thus a class of writers now see the plowing under of green crops, especially of clover, as the all-sufficient remedy and restorer of worn-out lands. Now that clover is a great and valuable improver and one of the cheapest we possess, I have no doubt at all. But it does not follow that therefore it will effectually restore fertility to every class of soil. In some cases, where the soluble organic elements of plant life are all that the soil needs to perfectly balance its elementary constituents, it may—and does frequently—prove the all-sufficient remedy. But we must not forget that the fertility of a soil results from the equilibrium or balance of each of the constituent elements of plant life in the soil; and though it may have either of the most valuable soluble elements of plant life in great excess, unless the inorganic or mineral constituents of plants exist in proportionate quantities, the soil cannot be fertile or productive.

When, for instance, General Lee fell back from Petersburg he ordered quite a considerable magazine of ammunition to be exploded about a quarter of a mile from our Court-house, and large quantities that remained unexplored had the out-casing of the cartridges destroyed by the weather, and the nitre or nitrogen of the powder washed by the rains into the soil. The result is that the place has been ever since perfectly barren, like a perfect waste; and yet there can be no doubt that that soil is excessively surcharged with nitrogen.

Six years ago I seeded my wheat land to clover. I had sowed on some portions of my wheat 400 lbs. of Boston Milling Co.'s bone flour, and six bushels of salt to the acre, and on other portions I mixed 200 lbs. of the bone flour with 200 lbs. of soluble Pacific guano. Of course I had an elegant plant of clover. The second season the clover was not used or cut till late in the fall, and left on the land, when 200 lbs. of plaster was sowed and the land rolled, the clover remaining on the surface as a mulch. I then sold the place and removed from the county, and cannot say what have been the subsequent crops, only I learn that the land has been seeded to clover since, and a clover soil was fallowed for wheat last fall. Upon the theory of our friends the wheat ought to be first-rate and the land highly improved, which is not the fact; for the wheat is very sorry, and there is very little clover making its appearance.

Professor Ville's is undoubtedly the true theory—namely, take pains in choosing and marking out carefully plots of equal size and quality of soil in the field, treat the whole precisely the same as far as cultivation is concerned, then sow equal quantities of the specific elements of commercial fertilizers separately on each plot by themselves. On others sow them combinedly—that is to say, two of the separate elements on one plot, three on another, and so on until all the variations necessary to make the test complete is made, treat all with perfect equality in subsequent cultivation, and thus learn practically what each field needs. Do not forget that soils are very diverse in their constituents, and what may be true of one is not true of another. Be impressed with the inexorable truth that there is not and cannot be any universal specific for lack of fertility. Do not let us be like the dupes of quack-medicine venders in believing their representations that their medicines meet every case.

We must be patient, persevering and persistent first in learning the character of the disease of our soils, then we may intelligently apply the remedy at comparatively a small cost, and I feel assured we may be practical and successful physicians, bringing our soils up to as high a state of cultivation as any in the country, if, instead of relying upon one thing as a specific, we, by small and inexpensive tests, as advised above, first determine what we need, and act accordingly.

G. B. S.

[For the Southern Planter and Farmer.]

I notice the "Reviewer" of the March number of the *PLANTER AND FARMER* thinks the rearing of poultry as a farm product is not profitable, and gives as his reasons, so many dying with cholera.

I would like to give "Reviewer" a little of my experience, and hope I may be able to convince him he is wrong; and that poultry as a farm product, or the poultry business alone, will pay and does pay handsomely. There is a preventative if not a cure for this terrible disease of chickenhood, and if strictly adhered to will save the lives of thousands of fine fowls.

Now for the preventative. The first and most important is cleanliness; keep every coop, roost, run, &c., scrupulously clean: use as disinfectants carbolic acid, lime, copperas, or any other which may be convenient (I prefer the acid); dust the bottom of every sitting-hen's nest well with finely-powdered sulphur (the stick-sulphur or brimstone is strongest and best); keep the drinking-troughs well supplied with pure fresh water, with a piece of assafoetida as large as an hickory-nut in the bottom of the trough; and to keep it (the assafoetida) from being misplaced, tie it in a piece of cloth and tack it to the trough; this will last a good long while; give the fowls plenty of good sound grain (corn the best) twice a day, morning and evening; pepper-dough once a week: and give yourself no uneasiness as to the health of your fowls.

I myself have lost numbers of fine fowls, and all for the want of necessary attention. Since adopting the above plan my fowls are always healthy, while I hear of those around me losing them by tens and twenties.

I believe there has as yet no remedy been found for this terrible disease; but there is certainly a preventative, and I need no better proof of the assertion than the health of my fowls. Let those who discredit this statement give it a trial, and I am certain they will be convinced that poultry as a farm product will pay; and that the poultry business exclusively can be made a source of great profit and wealth.

Clifton Hill, Caroline county, Va.

W. T. B.

[For the Southern Planter and Farmer.]

Mr. Editor:

At this writing (20th May), the weather is quite cool; nearly cold enough for frost last night. The oat crop on the low lands of the Cape Fear is almost an entire failure, owing to so many freshets late in the spring. Owing to the continuous cool nights and heavy rains, the stand of corn is bad; much to be planted over yet. The cotton crop in this section will fall far behind last year. Not near as many acres planted; but little guano used, and the season for planting is near three weeks later than common. Fertilizers did not pay us last year, and many farmers have decided not to use any more. Use compost and barn-yard manure; it is

the only safe plan. Laborers are in great demand, and farmers are offering fair prices. Will write you again as the season further advances.

DUFFIE.

[For the Southern Planter and Farmer.]

Editor Planter and Farmer:

Dear Sir—In my former letter to you I promised at some future time to tell about a crop of roots I grew last year; not that there was anything extraordinary about it, but being experimental, as far as this county is concerned, I thought it would be well to let my brother farmers know through the medium of your admirable publication the way the work was done, and the results as far as I can tell.

The way in which the land was prepared and the crop cultivated is but a modification to suit circumstances of the system of root growing commonly pursued in the British Islands. I commenced in the spring plowing a piece of bottom land out stubble with three mules abreast to a 14-inch cast-steel plow, following in the same furrow with a 10-inch Dixie plow drawn by two stout mules, throwing about 8 inches with the first and 3 or 4 inches with the second plow, thus loosening the soil to 11 or 12 inches depth on the land side of the plow; and I may as well remark here that had the stubble been very shallow plowed and harrowed early in the fall, that the seeds of weeds might sprout, and afterwards been double plowed just before winter, it would have left the land cleaner, and probably in better condition otherwise for bearing a first-rate crop.

I had the ground harrowed, and drills made by throwing two furrows together something like the old-fashioned corn rows, in vogue here yet, but much closer—say 3 feet 3 inches apart from top to top—and it is not practicable to work much closer unless the ground is very well prepared, and the after tilling done by a well-skilled hand—just such a thorough, pains-taking fellow as Mr. George Geddes takes occasion to sneer at in a recent number of the New York *Tribune*. The furrows, as opened, were filled with well-rotted manure; and on part where I planted early-rose potatoes—say $\frac{2}{3}$ of an acre—the sets were dropped 12 or 14 inches apart along the rows under the manure; the drills were then split with a two-horse Dixie plow, the same I used to open them, thus leaving a ridge where there had been a furrow. The drills where I sowed mangels and carrots—say about $2\frac{1}{2}$ acres—were then rolled flat on top, and a little furrow made straight along the top with the handle of a fork; the seeds were sown and covered up immediately, the weather being dry; there was a little gnano sown with the seed on the tops of the drill. After the plants had come up well, I sent the best hand with the gentlest mule to plow between the rows; the slight hollow left was a good “alley” for them to walk in, and I had put a revolving coulter and a small

mouldboard on a one-horse Dixie plow: the former severed the ground and grass roots with a downward cut, and at the same time hindered all clods from rolling on the young plants, thus allowing the plow to run with the land side much closer to the plants than would be otherwise practicable; the broad hoe was then used, cutting the bone of the drill through, and leaving but little tufts of mangels; every 12 to 16 inches along these were then singled out by hand; they were hoed twice in the course of the season, and when large had a little earth thrown against them. All grew well until the extreme hot weather, which seemed to check their growing a little; then the striped potato-beetle eat the leaves of the mangold-wurzel. After the rains began to fall again in the latter half of August they regained their leaves, and the carrots got new tops, all growing off finely until frost in November, when they were harvested by cutting off the tops with a sharp hoe, and carting to a pile pointed at top, and cover it with straw during the winter; they were fed to milch-cows and fattening hogs, and the white Belgian carrots to horses; the mangels were of the Yellow globe and the Leroy red varieties. The land was too wet for them, and toward the last the lower ends of the roots began to decay. I was sick at the time of harvesting, and in consequence cannot tell the exact yield, but it was at the rate of 400 bushels per acre, or nearly so. In June I sold the produce of $\frac{1}{2}$ an acre of the early-rose potatoes for nearly \$60, the purchaser picking them and paying \$2.50 per barrel. After they had been removed, the piece of land was plowed and harrowed and let stand until near the middle of July, when I had it sown broadcast with 100 bushels of super-phosphate, and then opened in small drills and sown to ruta-baga turnips, in a manner similar to the mangels; they were over-plowed and thinned, and produced between 300 and 400 bushels of beautiful turnips. [N. B. There is not a particle of wire-grass to be seen where they grew; the dense shade seems to have killed it entirely.]

About May 1st, '73, I plowed and sub-soiled a piece of upland wheat stubble in the manner already described, harrowed and re-plowed twice during the summer; manured in drills as for mangels, had everything ready for sowing, so that when the rains began to fall in August I had only to put in the seed. I plowed, hoed, and singled over, and harvested between 2000 and 2500 bushels of turnips ("Aberdeen") from 5 acres, which I fed to sheep and fattening cattle during the winter.

I have not sown any mangels nor carrots this year, but expect to sow about 8 or 10 acres of ruta-baga and Aberdeen turnips for sheep, the greater part of which I do not intend to gather, but throw to a furrow out of the alley on the roots from each side, and uncover as needed by the sheep to eat on the ground, thereby saving the most expensive thing connected with this crop—viz: the harvesting.

Very respectfully yours,

Whitemarsh, Gloucester Co., Va., May 20. JOSHUA FRANKLIN.

Poultry Department.

POULTRY KEEPING.

The gross value of the poultry products of the whole country in a single year reaches an amount greatly in excess of the ordinary estimates of casual observers. The amount consumed by farmers and other residents of rural districts is certainly equal to the amount sent to the markets of cities for sale, and this moiety of the whole production is lost sight of in estimating the gross amount. When we remember that 20,000 barrels, or about 15,000,000 eggs, are not an unusual weekly receipt in the markets of the city of New York alone, and that occasionally a week's receipts are considerably over that quantity, the total value of the egg production of the United States can be readily supposed to be of great pecuniary interest to the farmers. In addition to this there is the business in poultry, both living and dressed, which must certainly be of equal value, at least, to the production of eggs. And yet nearly all this vast production is dependant only upon irregular effort and the spontaneous labors of farmers' wives and children. It is never looked upon as a regular branch of the industry of the farm, nor is it brought under studied supervision as a special industry. It may be supposed that this remark does injustice to the large number of enterprising breeders of fancy poultry, whose efforts to raise the character of our feathered stock have so greatly increased the profits of the business. But this branch of the business is altogether distinct from the production of eggs and flesh for food, and it is very rarely that a prize fowl or its eggs appear upon any tables but those at the exhibitions. The remarks we have here to make are not intended for those persons who are breeders of poultry for stock purposes, but for the greatly more numerous class who might learn many useful lessons from the care and skill with which their flocks are managed.

Notwithstanding the large extent of our poultry business, it might very profitably be trebled or quadrupled. Farmers very rarely kill poultry for their own use. The constant pork upon their tables during all seasons of the year might very well be banished in great part, and poultry be substituted. If pork is a cheap food, so is poultry. Every reason for keeping pigs applies with greater force in favor of poultry. If the same care to provide sufficient shelter and food were given to fowls that are now given to hogs, a largely increased production would result. Poultry flesh can be produced as cheaply as pork, and for a considerable portion of the year fowls are most active consumers of predatory insects. If their instincts in this direction were given full scope, their services would be of great value. But very strangely, both their value as insect destroyers and as producers of food for domestic purposes and for the markets is ignored. Their habits are not studied, their necessities are not considered, and their presence upon the farm is simply tolerated because they are favorites with the women and children. A man who will carefully nurse a lit

ter of pigs will feel it beneath his dignity to give any attention to a brooding hen or a nest of chicks, and he will wring the neck of a hen which makes a nest in his feed-box without mercy or scruple; yet if he should count the real value of the two, he may find that the despised hen and chickens will bring him more money for the same outlay than the pigs. From very careful tests we are satisfied that if moderate care and attention to a few needed details are given to a lot of poultry they may be brought to market with double the profit that the same value of pork may be: also, if any person will give his sole attention to producing poultry upon a farm he may do so with little labor and great profit. Having succeeded in carrying a flock of 300 breeding hens through two seasons with safety, and having raised and sold an average of nine chickens and nearly 100 eggs per hen in each season by adhering to a few simple rules, we here repeat them for the benefit of those of our readers who are weekly inquiring how to go and do likewise. These rules apply equally for a few fowls as for a large number, and it was simply by experience with a few that we learned how to succeed with a larger number.

Only young fowls should be kept. All over three years old should go to market at such seasons as prices may be satisfactory. No weekly or sickly fowls should be kept: all such should be separated at once and treated until cured, when they should be sold. All troublesome, nervous "squawking" fowls should be promoted to domestic uses. Thus the flock is kept young, vigorous, healthy, tame, and easily handled. The treatment should be gentle, kind and regular, so that the fowls are educated to their owner's methods, and they readily fall into the discipline established. The food should be varied and given in regular rations, over-feeding should be avoided, and care taken to apportion their feed to their actual wants. A quarter of a pint of grain a day or its equivalent of other food is about the need of a fowl. Pure fresh water needs to be provided always ready for use, especially for young chicks. The roosts should be airy, well ventilated, not less than eight feet high, with earthen floors—as, indeed, should be all the houses—well lighted, and not too warm. The laying-houses may be made warmer than the roosts, and the sitting-houses should be darkened and kept specially for this business. All the houses should be swept out daily, the walls should be white washed at least twice each year, and the roosting-poles should be kept greased with a mixture of lard, sulphur, and kerosene oil—one pound of the first, and one ounce of each of the latter is the proper proportion—and every crack and crevice should be filled with the mixture brushed in while melted. These precautions will keep the flock free from vermin and disease of all kinds. When treated properly, there is no stock more healthy than poultry, and the reverse is equally true when they are improperly cared for. A run of grass land should be provided for the flock, and, if possible, the orchard should be fenced with pickets six feet high, and appropriated solely for the use of poultry. Here they may be pent up when the grain-fields need to be protected, and here they will do the most valuable service. We have found the most convenient location for the fowl-houses to be adjoining the orchard, with the doors opening into it which may be opened or closed at pleasure. This arrangement is about what is needed upon the farm, where there is abundant room. Upon small village lots, where space

is less ample, poultry-keeping becomes more difficult, because there is always temptation to enlarge the flock beyond the capacity of the ground. One hundred fowls to the acre is the extent beyond which no one should go who would succeed in making poultry profitable.—Upon smaller lots of ground the greatest care and watchfulness will be required to prevent loss and disease. Twenty-five to fifty fowls might be kept upon a quarter of an acre or less by providing two inclosures with the buildings between them. The fowls should be changed from one to the other weekly. While one is vacant it should be carefully cleaned and dug over at least a foot in depth, to bring up fresh, clean soil. The houses should, in this case, be cleaned daily, and lime-washed at least monthly. Sick fowls should be weeded out of the flock on the first symptom of disorder, and either put in quarantine or killed. One rooster to twenty-five fowls is sufficient. During the warm weather a plentiful supply of chopped cabbage or bunches of fresh clover should be given, and a shady retreat should be provided. The houses and nests should be made of smooth, closely fitting boards, and every crevice should be carefully filled with the lime-wash. Then if young fowls are kept one may expect a constant supply of eggs during the greater part of the year, and during the summer a fair supply of young chickens for consumption, and to replace the old stock, which should be renewed each year. If the grand requisites of roomy apartments, perfect cleanliness, a moderate supply of food, varied occasionally, fresh water, occasional doses of sulphur, pounded oyster-shells, and quietness with perfect regularity in the treatment, so that the fowls are contented and kept healthful, are attended to, any person of ordinary tact may provide without difficulty for all the contingencies that may arise after a very short experience. As a proof of what may be done toward the profitable improvement of poultry, we append the following weights of birds exhibited at a recent English exhibition :

Weight of Turkeys—Single Cock—First prize, 41 pounds ; second, 36 pounds 4 ounces ; third, 33 pounds 4 ounces. *Pair of hens*—First, 38 pounds 4 ounces ; second, 38 pounds 10 ounces ; third, 34 pounds 12 ounces.

Geese—White Gander—First, 31 pounds 8 ounces ; second, 26 pounds 10 ounces ; third, 25 pounds 4 ounce. *Pair of Geese*—First, 49 pounds 12 ounces ; second, 42 pounds 12 ounces ; third, 41 pounds 4 ounces ; *Gray Gander*—First, 26 pounds 8 ounces ; second, 24 pounds 6 ounces ; third, 18 pounds 14 ounces. *Pair of Geese*—First, 44 pounds ; second, 40 pounds 14 ounces ; third, 36 pounds.

Ducks—Rouen Drake—First, 11 pounds ; second, 11 pounds ; third, 10 pounds 12 ounces. *Pair of Ducks*—First, 20 pounds 6 ounces ; second, 19 pounds 8 ounces ; third, 16 pounds 2 ounces. *Aylesbury Duck and Drake*—First, 17 pounds 4 ounces ; second, 16 pounds 12 ounces ; third, 15 pounds 4 ounces.

How much the income from a lot of fowls upon a farm may be increased may be judged by comparing these weights with those usual in ordinary flocks.—*New York Times*.

[For the Southern Planter and Farmer.]

GAMES AGAIN.

Who can beat it? One hundred and six chicks hatched from one hundred and twenty-seven eggs. The time embraced in this statement embraces the three worst months in the year, viz: January, February and March; the number of hens employed, nine. My experience may be interesting, so I give it. The first four hens were set as follows: 1 on the 1st and 1 on the last day of January, and 1 on the 4th and 1 on the 10th day of February. Number of eggs set, 67; number of chicks hatched, 49—an average of upwards of 12 chicks to the hen. The remaining five hens were set as follows, and cannot be beat, by Brahmas, Cochins, Hamburgs or Houdans: 2 set the 27th of February on 15 eggs each, and hatched 30 chicks; and 3 set the 10th day of March, 2 on 13 eggs and 1 on 14 eggs. Total number of eggs for the last 5 hens, 70; number of chicks hatched, 67—an average of very nearly 14 chicks to the hen. I ask again the readers of this book, who can beat it? For when we take into consideration they were set the three worst months of the year, it is very hard to beat.

In my first I spoke for my Games; they now speak for themselves, and will boast of speaking louder than any other breed until they see something to compete with them.

Clifton Hill, Caroline Co., Va.

W. T. B.

COST OF SUPER-PHOSPHATES.

A letter I wrote you a year ago on artificial fertilizers, enclosing one from Mr. J. B. Lawes, of England, both of which you published, excited much comment in your and other papers by reason of its statements as to the cost and quality of foreign super-phosphates. This matter has since been further investigated, and the result appears in Part II. of the Bulletin of the Bussey Institution of Harvard University, where Mr. F. N. Storer, Professor of Agricultural Chemistry, gives the costs and analysis of several English and German super-phosphates. It appears that the Lawes super-phosphates, containing say 13 per cent. of soluble phosphoric acid, is sold at their works for £3 15s., or say \$20.63 per ton, and that it should be landed on wharf in Boston by sailing vessel from London, in quantities of not less than ten tons, for \$36 per ton, or say 12 $\frac{1}{2}$ cents for each pound of soluble super-phosphate acid. Also that English superphosphate of higher grade than that of Lawes', yielding 16 and 18 per cent. of soluble phosphoric acid, would cost, landed here, respectively 13 and 14 cents per pound of the acid. In Part I. of the Bulletin of the Bussey Institution, issued in January, Professor Storer has given analyses and values compared with selling prices, of eleven of the best known commercial super-phosphates sold in Boston, and after allowing it 6 cents for each pound of their insoluble phosphoric acid, and 20

cents for each pound of their nitrogen of uncertain value, it appears the average cost to the purchaser of each pound of soluble phosphoric acid that these eleven phosphorates contain is 31.80 cents, and that the average quality is 6.65 per cent., the highest being 10.23 per cent., and the lowest 1.46 per cent.

The researches of Professor Storer show that the American-made super-phosphates hitherto available to New England farmers are of too high cost and too little value to be bought and used to advantage, and that it is possible to make and sell a better article at a lower price, still leaving a fair profit to the maker or importer; and the correspondence elicited by his publication has also brought to light facts confirmatory of his conclusions, and encouraging to the many who are compelled to use artificial manures. For instance, Mr. George E. White, of 160 Front street, New York, writes to Professor Storer, April 13, that he will sell to such as wish to buy in lots not less than ten tons, a super-phosphate yielding 10 per cent. soluble phosphoric acid, at \$25 per ton of 2,000 pounds, delivered on cars or vessels at New York, in bags or barrels at his cost; and on April 30 he writes: "I offer to deliver in Boston a soluble phosphate of lime of high grade, guaranteeing 37 per cent. of anhydrous phosphoric acid, soluble in water, at \$90 per ton." This is a highly concentrated fertilizer of foreign manufacture, and great excellence. The cost of the soluble phosphoric acid in these two articles would be about 12½ cents a pound, or as low as the Lawes super-phosphate can be imported for, and very much less than in any commercial fertilizer hitherto available here. Mr. White says: "It seems as though we ought to be able to compete with the foreign manufacturers, and it is my opinion that both plain and ammoniated super-phosphates can be made in the neighborhood of this city as cheaply as at any point in the world. I say this with a full knowledge of the cheap supply of sulphuric acid, which foreign makers command."

This is certainly most encouraging, and if farmers hereafter will persist in buying an inferior article at \$50 or \$60 a ton, when they can get a better article for about half the money, and the result is a failure, they will have only themselves to thank for it. One trouble is, that many farmers buy and use something of which they only know that it is sold as a fertilizer, when it may not be what they need for their land or crops. One might as well go into a druggist's shop and take a dose from the first bottle he sees, kill or cure, as use a commercial manure of which he does not know the properties and adaptability to his present needs. Professor Storer, in the Bulletin above referred to, has begun a work which I confidently hope and believe will be—and indeed in the numbers already issued is—of the greatest value, as supplying from scientific and practical data, and in language clear, concise, and free from technicalities, the information we must all have before we can select the best materials, and use them to the best advantage.—*II. S., in Country Gentleman.*

Household Department.

HINTS CONCERNING HEALTH.—The warm suns will tempt many inconsiderate persons to make changes in their under-clothing which may prove very detrimental to their health. Flannel next the skin should by no means be removed until after the cold spell which always comes near the middle of May, and then thinner flannel or raw silk should be worn in place of what is taken away. In India, the British army is clothed in flannel the year round, and this regulation has been found effectual in preventing those summer complaints which formerly cost so many lives in that tropical country. We commend the suggestion herein to mothers of young children. Those living on the seacoast cannot with safety dispense with flannel entirely, even during the heated term. An east wind or any sudden change should find the safe covering ready to be put on at a moment's notice. A close observer will find that he takes cold not when the weather changes from warm to cold, but from cold to warm. Thrown off his guard by the mildness of the temperature, he neglects the necessary precautions, and suffers the inevitable consequences. When the difference in the height of the mercury at noon and midnight is greatest, then care is most necessary in the regulation of one's clothing as to amount and warmth. "The greatest sensation of cold which we ever experienced," says a writer on health topics, "was in the morning at five o'clock, with the thermometer at 56° in Texas, where we were accustomed to ride under a sun heat of 150° during the day."

Persons of good constitution and sound health are apt to think they can violate hygienic laws with impunity; that they can eat at irregular intervals, and do anything they fancy; can sleep as much or as little, and when they please; can sit with damp feet, and do, in general, exactly as they please, and it will be all the same. As well might a Rothschild fancy that his vast fortune needs no looking after; that extravagance will not waste it; that panics will not affect it. He knows better than that, and every possessor of fine health should know that this invaluable gift is to be cherished, cared for and preserved, or, like other riches, it will take to itself wings and fly away.

To those who live in close or crowded rooms, we mention an experiment made by a physician in England:—"I have repeatedly taken organic matter from the windows of a crowded room and experimented with it. This matter condenses on the glass and walls in cold weather, and may be taken up by means of a pipette. If allowed to stand some time it forms a thick, apparently glutinous mass; but when this is examined by a microscope it is seen to be a clearly marked coniferoid (resembling sea-weed) growth. This matter in the air is as injurious to health as organic impurities in water, and acts as a ferment by which diseases of the nature of fever are engendered.—*New York Tribune*.

THE HOUSEKEEPERS' TABLE.—The following is a very valuable house-wife's table, by which persons not having scales and weights at hand, may readily measure the article wanted to form a recipe without the trouble of weighing. Allowance should be made for an extraordinary dryness or moisture of the article weighed or measured.

Wheat flour, one pound is a quart. Indian meal, one pound two ounces are one quart. Butter, when soft, one pound is one quart. Loaf sugar, broken, one pound is one quart. White sugar, powdered, one pound one ounce are one quart. Best brown sugar, one pound two ounces are one quart. Ten eggs are one pound. Flour, eight quarts are one peck. Flour, four pecks are one bushel. Sixteen large tablespoonfuls are half a pint. Eight large tablespoonfuls are one gill. Four large tablespoonfuls are a half a gill. Two gills are half a pint. Two pints are one quart. Four quarts are one gallon. A common sized tumbler holds half a pint. A common sized wine glass holds a gill. A teacup is one gill. A large wine glass is two ounces. A tablespoonful is half an ounce. Forty drops are equal to one teaspoonful. Four teaspoonfuls are equal to one tablespoonful.

PIE PLANT PIES.—Never stew your pie plant before making your pies. Peel the stems of rhubarb and slice them in half-inch lengths, holding several stems in the hand at one time. With these fill the pie, sweetening it generously—about the same as for a lemon pie, a small teacupful of sugar for a medium-sized pie—moisten with a great spoonful of water, dust over this a little dry flour, to thicken the juice a little, cover it with the upper crust and bake it slowly and thoroughly. Such a pie is too rich for some stomachs, and there is a way of dispensing with part of the sugar, without having the pie too sour. Not by the use of soda! No, indeed! But pour boiling water over your sliced rhubarb, letting it stand ten or fifteen minutes. Pour this off and make your pies of the rhubarb, with less sugar. If you stew pie plant for sauce, you can pour off a part of the juice before it is done, using it to make jelly if you like and supply its place with more water, thus economizing sugar.

GUM ARABIC STARCH.—Take two ounces of white gum arabic powder, put it into a pitcher, and pour on it a pint or more of boiling water (according to the degree of strength you desire), and then, having covered it, let it set all night. In the morning pour it carefully from the dregs into a clean bottle, cork it and keep it for use. A tablespoonful of gum water stirred into a pint of starch that has been made in the usual manner, will give lawns (either white, black or printed), a look of newness, when nothing else can restore them after washing. It is also good, much diluted, for thin, white muslin and bobinet.

BOOK NOTICES.

History of the Grange Movement or The Farmers' War Against Monopolies.
By J. D. McCABE, JR. Published by the National Publishing Co., Philadelphia.

This book is what it pretends to be, which is more than can be said of many similar publications now-a-days. It enters into many interesting details of the way in which monopolies, especially railroads, have managed to defraud the people. How public lands are secured and appropriations of money

and credit procured from Congress, and how, after the whole road is made and paid for by the people, the original charter holders manage to secure the road to themselves and leave the people to pay extortionate rates of transportation over the railroads they have built. It is the only complete work on this interesting and popular subject we have seen, and any one who wishes to make himself thoroughly acquainted with this interesting movement should not fail to secure it at once.

Maternity. A Popular Treatise for Young Wives and Mothers. By T. S. VERDE, M. D. J. B. Ford & Co. Publishers, New York.

It is frequently very difficult in reading the popular medical treatise of the time to tell exactly where medical science ends and quackery begins, and we always take up a book professing to disclose to the popular mind the mysteries of medical science with many misgivings either as to the ability of the author or his honesty. This book, however seems to be an exception to this rule. When we received it several weeks since, we gave it to a married lady, the mother of a large family, and this is what she says of it:

"It is one of the most complete and instructive books of the kind that we have ever seen. It treats with great delicacy of delicate subjects, and contains many valuable suggestions and a vast amount of information of great importance, not only to every wife and mother, but to all who have the care of children. It gives a very plain description of all the diseases of childhood and the best method of treating them, and also minute and valuable dietic and hygienic directions which if observed would prevent a large part of the diseases now so fatal to childhood." The lady in question is perfectly capable of judging of the merits of such a book, and we do not hesitate to endorse her opinion. For sale by the publishers.

"*Out of the Hurley Burley*" Max Adler.—The getter up of this laughable collection of *funny pieces* has been for years contributing these articles to the press. They have now been collected and published in a neat volume by "To-Day Publishing Co.," Philadelphia. The purchaser of this handsome volume will have an admiral opportunity of reducing to practice the old adage "*laugh and grow fat*." It is one of those books that may be kept on the table all the time to be taken up and read after dinner to the immense benefit of our digestion. Long life to Dio Lewis the Laughing Philosopher and all the jolly crew of the To-Day Company. They try hard to keep humanity in a broad grin, and if they issue a few more books like this they will be in a fair way for success.

CROP NEWS.

It seems that this is a great year for insects. In our own ground we have never seen them so abundant in all our lives. Our melon vines, despite all remedies heretofore effective, have fallen a prey to the spoiler. Our early tomatoes have been cut off by the Cut worm or defoliated by a little black bug. Our cabbage plants are like sand sifters, and the tobacco plants are being *chawed up* before their time. This is an almost universal complaint in Virginia. We have heard from a dozen or more tobacco growing counties, and all complain in the same way. The warning of an old darkey just sounded in our ear that "better look out: heap of chinch bugs in de air," is, we fear, prophetic. From other States come similar complaints. The peach growers in Maryland and Delaware are complaining of the destruction of their trees by a little black bug hitherto unknown.

Accounts from Southwestern parts of Minnesota represent that the ground is literally alive with grasshoppers, which have already commenced eating the vegetation.

The wheat crop, though falling short of the splendid promise of early spring, is much better than any made for years in Virginia. With favorable weather for the next few weeks we may expect a large yield of this most important crop.

Winter oats are also looking remarkably well. Spring sown oats though usually late, are very good, and promise a large yield.

Corn was planted late and the Cut worm is unusually bad in many localities, making replanting necessary.

HERMITAGE NURSERIES,

Richmond, Virginia.

JOHN W. RISON,

PROPRIETOR OF

Hermitage Nurseries,

RICHMOND VIRGINIA.

1,500,000

APPLE AND PEACH TREES,

FOR SALE THIS SPRING AT REDUCED PRICES. FIRST-CLASS APPLE TREES, \$16 per hundred. FIRST-CLASS PEACH TREES, \$14 per hundred.

These Trees are warranted true to name and is strictly first-class stock.

SEED STORE AND OFFICE,

909 Main Street Richmond, Va. feb

FOR SALE,

ITALIAN BEES,

BEE HIVES, &C.

I am prepared to furnish, at short notice, Swarms of Black Bees at \$5 per swarm, Hives extra.

Swarms of Italian Bees at \$10 per swarm, Hives extra.

Italian Queens (with a few workers), by mail or express, \$5. Safe arrival guaranteed.

A cheap Movable Comb Hive without surplus boxes..... \$3 00

A better Movable Comb Hive with two surplus boxes..... 3 75

Triumph Bee Hive, Movable Comb, and upper or surplus chamber, or six surplus boxes (trade mark included to use one Hive), painted, and with feet..... 5 00

Deeds for individual rights to make and use the Triumph Hive..... 5 00

Deeds for individual rights to make and use the American side opening Hive... 5 00

Bee Vail for protecting face and head... 1 00

Cheap Honey Extractor, Virginia made.. 9 00

Large Honey Extractor with cog wheels 13 00

Peabody Honey Extractor at factory prices, freight to be added..... 15 00

W. R. POLK,

Real Estate Agent and Auctioneer.

No. 7 Shaffer's Building, Tenth St., bet. Main and Bank Sts., Richmond, Va. ap-

FOR SALE.—Thoroughbred Stock, &c. I have for sale a lot of thoroughbred Devon Cattle. Essex Pigs from improved Stock. Also a lot of Light Brahma Fowls. Persons ordering from me can rely upon getting as good stock as any in the State. My herd of Devon are of the most improved breed. I took five 1st premiums on a portion of them at our last Virginia Fair. For further particulars address,

feb-6m F. W. CHILES,
Mansfields, Louisa Co., Va.

Cranberry Plants


FOR SALE.

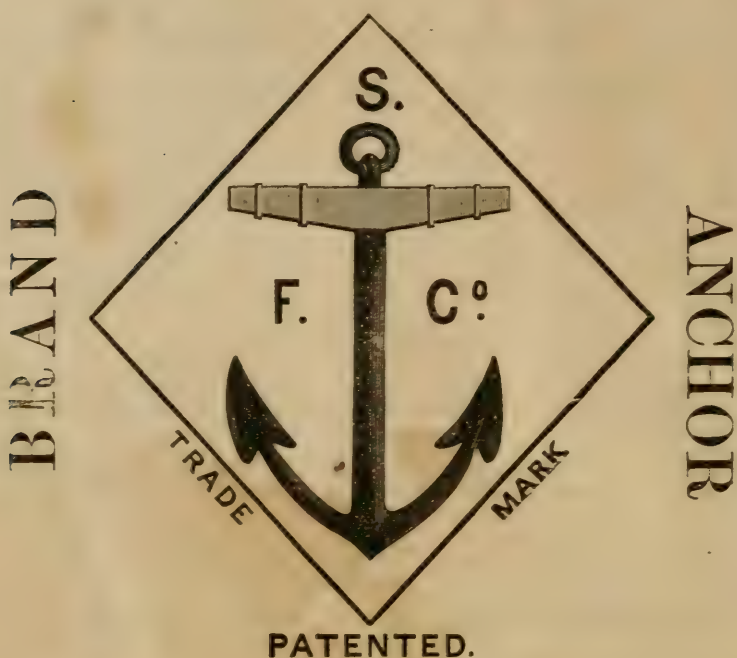
\$4 per 1,000. \$12 per bbl.
Apply to

EDITORS PLANTER & FARMER.

EDW. J. EVANS & CO.,
Nurserymen and Seedsmen,
York, Penn.

A complete stock of Fruit and Ornamental Trees, Garden and Flower Seeds, Seed Wheat, Seed Oats, Seed Corn, Seed Potatoes, Grass Seeds, &c. Send for Catalogue and price lists. feb-10t

 The Oldest and most Reliable Application for the Tobacco Crop.



TOBACCO FERTILIZER,

PREPARED BY THE

SOUTHERN FERTILIZING CO.,

RICHMOND, VA.,

—O—

Apply to local Agents, or any commission merchant in Richmond.

Where Agricultural clubs or Associations wish to purchase in large lots, the rate at which it will be supplied will be indicated on application.

(p 32)

BUY YOUR DRY GOODS OF LEVY BROTHERS,

and save money by doing so. Great reductions have been made in the prices of DRESS GOODS in order to close out the whole stock.

Sateens at 35, 50, 65, 70, and 75c.—a reduction of twenty-five per cent.; Empress Cloths at 35, 50, and up to 75c. per yard; Silk-corded Poplins at 75c. per yard, worth \$1.25; Poplin Alpacas—best quality—at 40c. per yard, sold everywhere at 50c.; Corded and Plain Alpacas at 25c. worth 35c. per yard; Black Brocaded Alpacas at 25c. worth 50. per yard; Black Alpacas, Mohairs, and Brilliantines at all prices;

Bombazines from 1.25 to \$2 per yard; Australian Crepe at 50c. worth 75c. per yard;

Handsome Brocaded Poplins, all silk and wool, at \$1 per yard, reduced from \$1.75; Handsome Silk and Wool-Striped Poplins, 18 $\frac{3}{4}$ yards in a pattern, for \$15, reduced from \$25;

Doubled-faced Cotton Poplins at 11c. per yard, worth 25c.;

Doubled-faced Cotton Poplins at 16 $\frac{3}{4}$ c. per yard, worth 30c.;

Calicoes at 6 $\frac{1}{4}$, 8 $\frac{3}{4}$, 10, and 12 $\frac{1}{2}$ c.;

White Flannel, full yard wide and all wool, at 45c. per yard worth 60c.;

White Flannels, in all qualities, from 20c. up to \$1 per yard;

Colored Flannels in all qualities;

Bleached and Unbleached Canton Flannel from 12 $\frac{1}{2}$ to 45c. per yard;

Domestic Gingham at 17, 12 $\frac{1}{2}$, and 16 $\frac{3}{4}$ c.;

Cheviot Shirting at 16 $\frac{3}{4}$ c. worth 25c. per yard;

Linseyn from 15 $\frac{3}{4}$ to 40c. per yard; Bed-Tick from 10 to 35c. per yard;

Doeskin Casimere at \$1 per yard worth \$1.25;

Excellent Satinets at 50, 60, and 75c. per yard; Kentucky Jeans from 16 $\frac{3}{4}$ to 50c. per yard;

Charlottesville Casimeres at a very small advance on manufacturers' prices; Water-Proof Cloths at 75c., 1, 1.25, 1.50, and \$1.75 per yard; Black and Brown elveteens at 50c. worth 75c. per yard;

Black and Colored Velveteens in all qualities; Trimming Velours, in all colors, at \$1, and \$1.50 per yard; Silk Velvet, black and colored, for trimming and millinery use; Table-Cloths, pure linen, two yards long, at \$1 worth \$1.50;

Linen Doilies at 50, 60, 75c. and \$1 per dozen—all 25 per cent. below regular prices; Huckaback Towels from 1.25 to \$9 per dozen; We call particular attention to our Towels at \$2.25 and \$3 per dozen; Napkins at 1.25, 1.50, 1.75, \$2, and up to \$6 per dozen; Linen Damask for table-cloths from 50c. up to \$2 per yard; Extra Long Table-Cloths from \$8 up to \$20; Cotton Diaper at \$1.25 and \$1.50 for a piece of ten yards, worth 1.75 and \$2; Linen Bird's Eye Diaper at 30c. worth 40c. per yard; A full assortment of Ladies' Cloaks, Water-Proofs and Shawls, all at great bargains; Gentlemen's Shawls and Gardigan Jackets, very cheap; White and Colored Bed Blankets, all sizes and qualities, at extremely low prices; Calico Comfortables, home manufacture, at 2 and 2.50 worth 3 and \$3.50; Carpets, Matting, Oil-Cloth, Rugs, Mats, and Window-Shades at reduced prices; Children's Carriage-Blankets at \$1.50 worth \$3; Silk, Linen, and Cotton Handkerchiefs, in all qualities; Nubias, Hoods, Breakfast-Shawls, Leggings, Scarfs, and Sacques; Genuine Buck Mits, Gloves, Gloves and Gauntlets; Bobbin Edging, 18 yards in a piece, for 50c. worth 5c. per yard; Worked Dimity Bands at 10c. worth 20c.; Clark's and Coat's Spool Cotton at 70c. per dozen; Machine Needles from 40c. to 50c. per paper of ten needles; Best Machine Oil at 15c. per bottle; Tidies at 35 and 50c. worth 75c. and \$1; Gilt and Jet Jewelry in great variety; Ladies' Linen Collars at 50c. per dozen, \$1.50 Collars at 1, 1.25, and up to \$2.50 per dozen; Gentlemen's Linen Collars at 60, 67 and \$1 per dozen worth 2 and \$2.50; Gentlemen's Recherche Cuffs at 1 worth .45 per dozen; Crochet Edgings at 15, 25, and 50c. for a piece of twelve yards, worth a good 10c. per yard; Neck Scarfs at 25, 40, 50c. and up to \$1.50—all much below usual prices; Full-width Unbleached Sheeting at 28c.; Full-width Bleached sheeting at 33c.; New York Mills and Wamsutta Cotton at 18c. per yard; Excellent yard-wide Bleached and Unbleached Cotton at 10 and 12 $\frac{1}{2}$ c. per yard, and thousands of other bargains at

LEVY BROTHERS

feb.] 1017 & 1019 MAIN STREET, RICHMOND, VA.

CHESAPEAKE AND OHIO RAILROAD.

On and after SUNDAY, April 19th, 1874, passenger trains will run as follows :

FROM RICHMOND :

8:30 A. M. MAIL TRAIN.—For Gordonsville, Charlottesville, Staunton, White Sulphur, Hinton, and all intermediate Stations, daily (except Sundays), arriving at Hinton at 10:10 P. M. This train connects at Gordonsville for Orange, Culpeper, Warrenton, Manassas, Alexandria, Washington, and the North, and at Charlottesville for Lynchburg, Bristol, Knoxville, Chattanooga and the South.

4:45 P. M. ACCOMMODATION TRAIN.—For Gordonsville and all intermediate Stations, daily (except Sunday), arriving at Gordonsville 8:30 P. M.

9:30 P. M. CINCINNATI EXPRESS.—For Gordonsville, Charlottesville, Staunton, Goshen, Millboro, Covington, White Sulphur, and all Stations west of White Sulphur, daily (except Sunday), arriving at Huntington, 5:30 P. M. This train connects at Gordonsville for Washington, Baltimore and the North, and for Lynchburg, Bristol, and the South, and at Huntington with the Steamers Bostona and Fleetwood for Cincinnati and all points West and Southwest, arriving at Cincinnati 6 A. M.

Baggage checked through.

FOR THROUGH TICKETS, rates, and information, apply at 826 Main street, Ballard and Exchange Hotel, or at Company's Office, Broad Street and Sixteenth.

A. H. PERRY, General Sup't.

EDGAR VLIET, General Passenger and Ticket Agent.

[my—tf]

EGGS (THAT WILL HATCH) AND CHICKENS TO SELL ! BY AN AMATEUR TO PAY EXPENSES.

The most attractive and beautiful of all LAWN PETS is the POLAND FAMILY with TOPKNOTS, as large as oranges. Colors: Jet Black, Pure White, Black with White Crests, Silver and Golden, both perfectly pencilled. All PREMIUM BIRDS purchased and imported at high cost. Also the beautiful Black Cochins, Light and Dark Brahmas and Games. General Sante Anna stock.

Eggs carefully packed. Chickens to sell after July.

FRANK EVANS,

my—tf.

No. 5 South Paul Street, Baltimore, Md.

EGGS THAT WILL HATCH!

AN AMATEUR TO PAY EXPENSES OFFERS HIS EGGS AT \$2.50 DOZEN.

THE POLISH FAMILY A SPECIALTY.

White Crested, Black, White, Silver and Golden, Light and Dark Brahmas, Buff and Black Cochins, all bred from premium chickens, carefully packed and delivered at express.

FRANK EVANS,

No. 5 South Paul St., Baltimore, Md.

To sell—1 trio White Cochins \$10.

2 trios Buff " 10.

2 " Light Brahmas 7.50.

Orders received for all kinds delivered by July 1st at low prices. [my—2m.]

B. A. HANCOCK, ATTORNEY AT LAW,

MANCHESTER, VA.,

Will practice in the Courts of Chesterfield, Powhatan and Henrico Counties; the city Courts of Richmond and Court of Appeals. SPECIAL ATTENTION given to cases in Bankruptcy and to collections in Richmond.

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Fertilizers and Seeds for 1873.

SOLUBLE PACIFIC GUANO.

NO. 1 PERUVIAN GUANO,
FLOUR OF RAW BONE,
Ground Plaster, Lime, Agricultural Salt, &c.

FIELD, GRASS, AND GARDEN SEEDS,
SEED POTATOES

Of the EARLY ROSE, EARLY GOODRICH, PEERLESS, and other choice varieties.

For further information and supplies, address

ALLISON & ADDISON,

SEED AND GUANO MERCHANTS, RICHMOND, VA.

J. M. THORBURN & CO.,
15 JOHN ST. NEW YORK.

Will mail, upon application, their New Catalogue of Vegetable and Agricultural Seeds for 1874.

FRESH

GARDEN and FIELD SEED

At the old stand of Palmer & Turpin,
1526 Main street, Richmond,
Orchard Grass,

Timothy, H-rds, Clover,

Kentucky Blue Grass-

Send for Catalogue.

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W. H. TURPIN.

Eggs, Cream, Milk and Lemon Biscuits,
and every kind of Crackers, made a
specialty. Pound and Fancy Cakes,
Ginger Snaps, Lemon Snaps, Jumbles,
&c., &c., &c.,

RICHARD ADAM,

Richmond Steam Bakery, 12th St., Rich-
mond, Va., manufacturer of all kinds of
Bread, Cakes and Crackers, wholesale
and retail. Orders from the country at-
tended to promptly. ap-1y

FOR SALE.

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acres! acres! acres! acres!

A FINE FARM FOR SALE.

Every convenience and improvement. Choice
fruit. In a splendid farming community, six
miles east of Nashville, Illinois. For full par-
ticulars and price address,

J. W. COGHILL,

Beancoup, Washington Co., Md.
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SEED POTATOES.

"RED JACKET."—A seedling from the Mercer,
which it resembles in flavor, quality and habits
of growth—about ten days later than the Rose,
yields twice as much as Peach Blow; white
flesh and perfectly hardy; in color, shape, size
and general appearance, has no equal. Received
1st. Premium at the Western N. Y. and Pa.
State Fairs, for best variety. 3 lbs. by mail,
\$1.00; 30 lbs. \$5.00; 60 lbs. \$8.00; bbl, \$15.00.
Free at Chili or Rochester Station. Circular
free.

A. S. JOHNSON, North Chili, N. Y.

L. POWERS & SON,

COMMISSION MERCHANTS

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WHOLESALE PRODUCE DEALERS.

1540 East Main Street, Richmond, Va.,

Flour, Grain, Hay, and all kinds Seed
and Eating Potatoes. Foreign and do-
mestic Fruits. Seed Potatoes a specialty.

B. F. LEWIS, GWYNEDD, Montgomery Co.
Pa., Importer, Breeder and Dealer in
fine Fowls, Pigeons, Pets, etc., of the purest
and best quality. Berkshire and Chester White
Pigs. Large Bronze and White Holland Tur-
keys. Rouen, Alesbury, and other fine Ducks.
China, Bremen, and other Geese. Asiatics,
Spanish, Dorkings, Hamburgs, White and
Brown Leghorns, Polands, Houdans, and sev-
eral varieties of Bantams; also Eggs for Hatch-
ing in season. Greyhounds, Newfoundland,
and Hunting Dogs. Black and White, French,
and Blue Maltese Cats, also many other spec-
imens of rare Fowls, Pigeons, Rabbits, and
other Pets. My Stock has been awarded 190
Premiums in five months. I would also call the
attention of Breeders to my celebrated Chicken
Powder, which will cure as well as prevent
Cholera, and other diseases in Fowls, as well as
promote their health and vigor. Sold at 50 cts.
per pound. A liberal discount to the trade.
Every one should try it. For Catalogue and
Price-List, address with stamp. ap.tf

THE WATT PLOW

CONTINUES TRIUMPHANT!



No CHOKING when bright and smooth ;
no LABOR to the plowman : ONE-THIRD
LESS DRAUGHT to the team ; thorough
BURIAL of Weeds, Grass, &c. ; great
STRENGTH, Durability and Economy in
its use, and complete pulverization of the
soil.

I have, within the past eighteen
months, made great improvements in the
WATT PLOW, and can, with greater confi-
dence than ever, commend it to the farming
community everywhere.

GEORGE WATT.

Premiums received during the last three
weeks of October, 1873 :

Virginia and North Carolina Fair, at
Norfolk, October 7, 1873—ALL FIRST

PREMIUMS AWARDED ON PLOWS.

The test of plows took place in a sandy loam, with weeds, &c., from four to six
feet high. The Watt Plow did not choke at all, and buried the vegetation per-
fectly.

North Carolina State Fair, at Raleigh, October 14, 1873—ALL PREMIUMS
AWARDED ON PLOWS.

Piedmont Agricultural Fair, Culpeper Courthouse, Va., October 14, 1873—ALL
PREMIUMS AWARDED ON PLOWS.

The test took place in a hard, stiff clay soil not plowed since the war, and covered
with running briars. The Watt Plow was run seven inches deep without diffi-
culty, and never choked, burying everything under.

Virginia State Fair, Richmond, October 28, 1873—ALL THE PREMIUMS ON
EACH SIZE, RIGHT AND LEFT HAND.

Also, two special premiums from the Society. Also, two special premiums from
the city of Richmond.

The Plows were tested in a sodded and heavy pipe soil. The working of the
Watt Plow was admired by all.

Western (N. C.) Fair at Salisbury, October 7, 1873—HIGHEST PREMIUM.

Darlington (S. C.) Fair, October 11, 1873—HIGHEST PREMIUM.

The WATT PLOW of all sizes, from one to four horses, warranted to do better
work, with more ease, than any plow in use. If they do not prove so after one
week's trial, they may be returned to us, and the purchase money will be refunded.

HARROWS, CULTIVATORS and ALL KINDS OF FARMING IMPLEMENTS
for sale on the best terms. Send for Circulars.

WATT & CALL,

Sole Manufacturers, Richmond, Va.

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EGGS FOR HATCHING.

I will now receive orders for EGGS from the following BREEDS OF POULTRY.
EGGS to be shipped in

MARCH, APRIL AND MAY.

LIGHT BRAHMA,	\$2 per dozen.
DARK BRAHMA,	2 " "
PARTRIDGE COCHIN,	3 " "
BROWN LEGHORN,	4 " "
HOUDAN,	3 " "
ROSEN DUCKS,	3 " "
SILVER SPANGLE HAMBURG,	3 " "

Cash to accompany order. Eggs delivered in rotation, commencing with 1st of
Marh.

ap 11

T. L. PAYNE.

S. P. and Farmer, Richmond, Va.

POWHATAN RAW BONE SUPER-PHOSPHATE,

MANUFACTURED BY

James G. Downward & Co.

—O—

TO THE PLANTERS OF

VIRGINIA AND NORTH CAROLINA.

We again respectfully call the attention of those intending to use fertilizers on their spring crops to the Powhatan Raw Bone Super-Phosphate, and particularly those who want a reliable fertilizer for tobacco and cotton, as we intend in the future, as in the past five years, to furnish an article which has no rival, regardless of price. Wherever it has been used by the side of any other fertilizer whatever, not excepting the deservedly popular and higher priced tobacco fertilizers of the day, it has in every case proved itself superior.

A few out of many of our certificates from our patrons:

BLACKS AND WHITES, Nottoway Co., Va., Jan. 1, 1872.

DEAR SIRs,—This is to certify that I have used the Powhatan Phosphate along side of three other kinds of fertilizers, each of which cost more than the Powhatan, and the difference in my crop of tobacco was greatly in favor of the Powhatan Phosphate. From my experience last year I think it a No. 1 manure, and recommend its general use.

Very truly yours,

SAMUEL F. EPES.

LUNENBURG Co., Va., Jan. 29, 1873.

GENTLEMEN,—I used your "Powhatan Raw Bone Super-Phosphate" last year on tobacco with perfect success and entire satisfaction.

Very respectfully,

R. H. ALLEN.

DINWIDDIE Co., Va., Jan. 13, 1872.

DEAR SIRs,—In reply to your request, I have no hesitation in saying that I prefer the Powhatan Raw Bone Super-Phosphate, bought of you last spring, to any preparation that I have ever used on tobacco. I wish you to furnish me again this spring.

Yours truly,

WM. B. COLEMAN.

POWHATAN Co., Va., Jan. 30, 1873.

GENTLEMEN,—Yours of 24th, asking my opinion of the Powhatan Phosphate, is to hand. In reply, I have to say it acted well on my tobacco—better than a more costly fertilizer that was applied by the side of it.

Yours truly,

Z. G. MOORMAN.

AMELIA Co., Va., Jan. 16, 1872.

DEAR SIRs,—In regard to the Powhatan Phosphate bought of you last spring, I take pleasure in saying that I am much pleased with its action on my crop. I used it on very thin land, 200 pounds to the acre, and my tobacco weighed better than any crop I have ever raised. I wish you to furnish me again this spring.

Yours, &c.,

GEO. H. WILLS.

HARMONY, Halifax Co., Va., Jan. 20, 1872.

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Yours truly,

EDWARD MOORE.

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GOING NORTH.			GOING SOUTH		
STATIONS.	MAIL.	EXPRESS.	STATIONS.	MAIL.	EXPRESS.
Leave Charlotte,	10.00 P. M.	8.15 A. M.	Leave Richmond,	1.28 P. M.	5.00 A. M.
" Air-Line Junction,	10.06 "	8.30 "	" Burkville,	4.45 "	8.29 "
" Salisbury,	10.06 A. M.	10.21 "	" Danville,	9.18 "	12.48 P. M.
" Greensboro,	8.30 "	12.45 P. M.	" Greensboro,	12.20 A. M.	3.50 "
" Danville,	6.20 "	3.12 "	" Salisbury,	2.35 "	6.05 "
" Burkville,	11.35 "	7.36 "	" Air-Line Junction,	4.29 "	8.10 "
Arrive at Richmond,	2.17 P. M.	10.17 "	Arrive at Charlotte,	4.35 "	8.15 "
GOING EAST.			GOING WEST.		
STATIONS.	MAIL.	EXPRESS.	STATIONS.	MAIL.	EXPRESS.
Leave Greensboro,	3.30 A. M.	4.45 "	Arrive	12.20 A. M.	9.35 "
" Co. Shops,	8.05 "	11.15 "	Leave	5.26 "	2.30 P. M.
Arrive at Goldsboro,					

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T. L. PAYNE.....Associate Editor.

RICHMOND, VA.,

NOVEMBER, 1874.

No. 11.

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Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON, PROPRIETOR
FRANK G. RUFFIN, EDITOR.

New Series. RICHMOND, VA., NOVEMBER, 1874. No. 11.

Editorial Department.

TO OUR READERS.

Our readers will see from the following circular of Maj. R. V. Gaines, Chairman of the Executive Committee of the State Grange of Virginia, that the *Southern Planter and Farmer* has been selected by that Committee as the Organ of the Patrons of Husbandry, with Col. Ruffin as their editor. It will also be seen from Col. Ruffin's prospectus that he has accepted and assumed this duty, commencing *with this number*. Col. Ruffin needs no introduction from us to our readers. His connection with this journal before the war, and his long and prominent connection with all the leading *agricultural* interests of the State, has made him one of our best known *representative* men.

We believe our grange friends will unanimously endorse this action of the Executive Committee, by at once securing us clubs of subscribers in their respective granges. Maj. Gaines, in his circular, says: "The paper is placed before you on its merits alone, as a means of supplying a long-felt and generally acknowledged want, and claims the support of the Order upon the ground that we have secured for our purpose one of the most respectable and largely circulated papers in the State, under the management of a gentleman of first-rate intelligence and capacity, of large experience, both as an

the advantages of enlightenment and education—which includes the experience of all ages—may be supposed best able to point the way out of our present troubles.

It is but just to the gentlemen who have invited me to assume this relation to the agricultural public, to say that they no more expect this paper to become the vehicle of any special views of their own, as indeed they have none, than of any clique, faction or party in the Order or out of it. But they do expect, and I certainly do intend, as far as I am able, that the farmers, whose interests have been hitherto disregarded in nearly everything, shall hereafter be heard and felt as a power in the State. To this great duty, thus briefly outlined, I am willing to dedicate myself; if adequately supported, I hope I shall discharge it efficiently; and so to have done it will fill the measure of my ambition.

It is enough to add that I shall attempt to make the best paper I can with the resources at my command.

FRANK G. RUFFIN.

WHAT IS A GRANGE?

“No pent up Utica confines our powers,
But the whole boundless continent is ours.”

The above question is often asked me, in the same tone, and with the same air of curiosity with which a similar question would be asked in regard to any new invention, to which some enterprising trader had given a fancy name. To men who approach such a subject, in such a spirit, it is exceedingly difficult to give reply. The truths which have forced the Order of “Patrons of Husbandry” into existence, have never been studied by such enquirers, and when told that the very fact of the existence of the Order is conclusive proof of its necessity, they turn away, little heeding any explanation which may be given.

Believing that I shall address myself to a different class of men through your journal, I propose to answer the question in the hope that I may induce others to study the subject.

First let me say, that the name “Granger” is one only applied outside of our gates; and a better idea of our objects, in this country particularly, will be impressed upon the minds of our people, by the use of the true name of the Order, that of “Patrons of Husbandry.”

Secondly, we aim at, and intend to accomplish the elevation of husbandmen and their families in all the land.

Thirdly, as the means to accomplish our end we seek to improve, foster and encourage, by every honest means, good husbandry in all its aspects.

- 1st. By binding in a bond of brotherhood, all farmers.
- 2nd. By protecting their material interests.
- 3rd. By teaching true morals.
- 4th. By raising a high social standard, to be impressed on all farmers and farmers' families.

These are useful, pure ends; and it may be asked, how are they to be attained?

It is one of the greatest boasts of this "progressive age," that the great principles of combination and co-operation have produced wonderful results—results only to be limited by the brain power brought to bear in any enterprise where these principles are put into active operation.

Out of, in round numbers, the twelve millions of active business, working men, in the limits of this government, there are within a fraction of six million engaged in agricultural pursuits. We find that in every other calling of every kind, whether it be professional, mechanical, mercantile, or manufacturing, each body of men, having an identity of interests, has some bond of union, by which to aid, encourage, and protect every individual who is a member of such union.

Every husbandman knows and feels the powerful results of such unions when he buys his supplies, or sells the products of his labour.

Who then is justified in raising the cry of "class" in order to deny to the husbandman the right to use the same machinery, the effects of which he feels in every article he uses and in every product he sells? And who can doubt that he will avail himself of it, when he is taught that it can be used by himself in his calling, as it is used by others in their callings?

As in all his operations, a good husbandman thinks it of the first importance to have a good team we find we have this in the (nearly) six millions of men we propose to engage in this work! and as to the brain power, without claiming anything for ourselves, we have only to point to the "editorials" and communications all the year round in every newspaper and periodical, and to hear the everlasting doses of eloquence, from the most gifted in the land, to be satisfied of our "intelligence," "our wisdom," and our "virtue."

For ourselves we find, that at the end of a year's labour, all our profits are absorbed by others, and as a rule nothing is left—hence we have to buy on credit and time prices, which yearly add to the mortgages and debts encumbering our efforts and our farms. By a slight effort of our "intelligence" we find that while we *sink* money, large classes of men are *making* money out of our labour: and by using our "wisdom" we are led to conclude, that if money can be made out of the products our labour, we are better entitled to it than any one else, and feel that our wives and daughters ought to share the comfort and consequent refinement which that product properly managed would afford, now enjoyed by the wives and daughters of others; and we can only preserve the "virtue" we are given credit for, by manfully looking into the question of what becomes of our profits, and

so managing as to retain them in our own pockets. We find further, that upon the articles we are obliged to use, the manufacturer, the importer, then the jobber, then the commission merchant, then the carrier, then the retail merchant, each and all make handsome livings, out of what we buy from them, and in addition a heavy per centage for bad debts and time on the interest we have to pay—upon many of the articles we are bound to have we are astonished to discover we pay from one dollar and forty cents to two dollars, for what ought to cost only one dollar, and we ask cannot we rid ourselves of this extortion, and if we do is not the saving between the true cost and the actual cost, equivalent to placing the difference in our own pockets, or an increase in the market price of our products? Then we look at the mode in which our produce is sold, and find that we come directly in contact with those, who for mutual aid and protection are members of Corn Exchanges, Flour Exchanges, Tobacco Exchanges and other associations of the kind, and of course the husbandman “goes under” when he undertakes to contend as an individual with these brotherhoods, when besides he has to meet “commissions, costs and charges,” which every husbandman knows are heavy items in his returns.

Home clubs, agricultural societies, State fairs have all been tried, and not one of them has reached, or can reach these evils, and though the troubled husbandman is often patronizingly given a free lecture upon the “laws of the trade,” “demand and supply,” &c., he finds, learned as they may be, they do not touch the case he is considering or solve the problem he seeks a solution for. Just here the Patrons throw light upon the subject by teaching him to combine and co-operate with his brother farmers who retain in their own pockets the difference between wholesale and retail prices, between cash and time purchases, between exorbitant and moderate commissions, between high and low freights, and thus have for their own use, and that of their families, the means wrung from his labours, upon which so many middlemen live and thrive. With the motto “In essentials, unity; in non-essentials, liberty; in all things, charity,” the Patrons invite him into their gates as a refuge from the evils he seeks to avoid. He finds there no ill-will to any one, but the simple fact, we can do better with our own machinery and prefer to use it, because it costs us less.

Any farmer who deserves the name keeps a regular account. Let him cast this up, and see the difference in the costs of the articles at wholesale and retail. Let him also see what he would have saved in the sale of his crop on the same principle. Let him look into his family expenses and “note the diversity” there too, and he will find the “margin” in saving well worth his serious attention, and let him bear in mind that under the system of the Patrons, “the more the merrier” is logically true.

It a manufacturer can by his skill and the use of improved machinery, reduce the cost of production or get his products to market at a cheaper rate, does he not have the moral right so to do, and does

he hesitate so to do, because some one may raise the cry that he injures other classes? Should any farmer do so, and how often is the secret of the manufacturer kept as the most precious of his possessions, and yet the objection is made that of Patrons is a secret one—true it is secret, it is necessary for the proper working of our machinery that we should keep it secret; our business is on so large a scale, so many interests conflict with it, that as prudent men we must exclude from our factory, all those whose interests would interfere with our machinery either by breaking it, as has been done in some factories where improper persons were allowed access, or by throwing in obstructions, which might prevent our machinery from working fairly, and as it is our own business we keep it to ourselves. This secrecy is not one of our own seeking, so far as our mere business is concerned, but a necessity forced upon us by others. As to other matters, secrecy is essential for similar reasons; because we have the right to know who are our brothers and our sisters, and we cannot know them, and they cannot know us, without the aid of the secret signs and tokens, by which we can claim the brotherly offices due from one to another. In the ordinary relations of life you have other means and public means, by which you can test the right of those who set up claims upon you. As Patrons we have no means save those we ourselves devise, and they must be secret to be effectual.

In order to accomplish our ends, we establish in every farming community, selecting the best material, organizations which we call subordinate granges, in whose hands we place the interests of the locality in which the Grange is, and the selection of those whom they deem worthy to assist in the work. These subordinate Granges are represented in the County Grange—the County Grange in the State Grange, and the State in the National Grange, in perfect analogy to the theory of representation in the State and Federal Legislatures; each Patron as he advances in his work, being endorsed by each separate Grange in the order I have mentioned, until he is brought directly in communion with the colossal power, and the mighty energies, which our Order develops, for the good not only of the Order itself, but for this “boundless continent.” And here it may be well to notice the inuendo often made, that we have “political views” and are liable to be “used by politicians,” or “may become political bodies.” I can let you inside the gates far enough to see that these insinuations made in various forms are the merest “Bosh.” Examine the list I have given you, and see how impossible it must be, for any man, however skillful, to pass through the various bodies I have named, without showing his cloven foot, and how easily he can be arrested in his progress; for any one of the bodies I have named, can and must “put a spoke in the wheel” of any enterprising gentleman who entertains the idea of making us political tools, for he is forbidden to discuss any political question in any way, or even the merits of a candidate in any step, in any one or all of these bodies at any and at all times. With the known open and avowed objects of the Patrons, acted on and taught publicly and privately, the insinuation of political objects is simply absurd.

Having laid the foundation for the improvement of the pecuniary condition of the farmer, and shown how that can be done by the Order, placing him in the independent condition which will lift him above the petty expedients and small acts, which poverty and dependence often tempt men to commit, we view the next of the benefits which the Order confers, by urging that it brings into actual contact the best among the farmers, with those, who from want of proper training, may be in danger of not having a sufficiently high standard of morals, and opening thus the best of all schools, the day by day teaching of true men, to those who by their brotherhood will look up with proper respect to their conduct, and thus be led to imitate and emulate the virtues of those, who have the highest position among them—whose opinions they will be bound to respect, from a benign regulation among us, by which all causes of difficulty, all questions as between man and man, *may* be under their decision, and all questions of disregard of true morality *must* be laid before them, where a brother is involved.

In this view it is proper to say, that every true Patron is the advocate, and a true worker in doing all that he can, to dispense the blessings of education to all around him—a duty the Order requires of him which he must discharge.

And lastly, to crown this good work, it is impressed upon the Order, always and under all circumstances, to build up and maintain a high social standard, to be shewn, not only in their regular meetings and social gatherings, but to be taught in their daily walk in life; and one of the highest ends in view in our introduction of females in our Order, and placing them in office, is to have this object obtained by their influence and example, to keep them in the position which they ought to occupy, as help-meets and counselors to husbands, fathers, brothers and sons; to stamp respect for them upon the very souls of every Patron,—to teach our young men the purity which woman's very presence brings—and with it the chivalrous devotion which is woman's right. Allow me to say to those who object to this feature of our noble Order, that *we* know, that to make high men, we must have them under the influence of high women,—would that such an objector would look on one of our matrons—see how

“In the calm heaven of her delightful eye,
An Angel guard of loves and graces lie,”

—mark her gentle, noiseless, teaching of faith, hope, charity and fidelity, which surround her as her constant attendant; see how her pure influences shed light upon the bronzed cheeks of those who heed her gentle, pure, quiet teaching—see the hardened hand raised in respectful homage to her worth—and he would turn away abashed at his own folly, and unite with us in thanks to God, that such influences as hers—true, gentle, pure and high, can be shed upon those who rise higher and higher in the scale of humanity, at every touch of the magic wand a true hearted woman wields.

W. M. AMBLER.

THE INSPECTORSHIPS OF TOBACCO, AND GOVERNOR
KEMPER'S ACTION.

It affords us very great pleasure in the first issue of this paper under its present control to record that one public officer has considered the interests of the planters in his appointments to office. A slight breeze has recently rippled the ordinarily placid surface of the Tobacco Exchange in Richmond, because Governor Kemper did not re-appoint those officers as inspectors on the part of the State who were pressed upon him by the owners or lessees of the warehouses in which they had been respectively placed by previous appointment of Governor Walker. The law, not Governor Kemper, had vacated their offices, just as much as it will vacate his at the end of his term; and the inspectors or their friends have no more right to complain if at the end of *their* term they are not appointed again, though each may have made an excellent officer, than *he* will have to complain if the people shall see fit to let him return to private life at the end of *his* term, no matter how good his administration will have been. Least of all should the lessees or owners complain in this case. The same law gives them the nomination of one inspector for each of their warehouses; and it is the duty of the Governor to confirm their nominations, or give his reason for declining to do so. This, one would think, should be satisfactory; and it would seem that each might say, "I have one inspector to attend to my interests, and that ought to be enough. Let the planter's interests be represented by an appointee of the Governor." This seems so obviously the suggestion of propriety that one wonders at even a momentary discontent except from the very worthy gentlemen who have been rotated *out* by law; and even they will probably quiet down when they remember that they were once rotated *in* by the same process.

We do not know how it may have been in other places, but here in Richmond the four appointees are gentlemen of character and business capacity, and represent, as nearly as it may be done, the great sections whence tobacco seeks a market in Richmond; and we presume the same considerations guided Governor Kemper in all his appointments. At all events it was a recognition of Planters as a class in the community, and an attempt to reach certain things in the trade as conducted in Richmond, which a good many people think should be reformed.

We do not propose to discuss them now. Our object is merely to chronicle the fact we have stated.

Since the above was written, public notice has been given by the proprietor of one of the warehouses, Mayo's, that that house will be closed on the 24th of December, in order that he may make it a private warehouse. As the inspector appointed for that warehouse by the Governor is not only a gentleman of perfect integrity, but skilled in tobacco, it is fair to presume that the purpose of the proprietor is to control the appointment of both inspectors. Why?

A COMPARATIVE FAILURE IN SHEEP RAISING.

It may be remembered by some of the readers of the *Planter* that I contributed to the January number of the *Planter* an article on the "profits of sheep-raising on James river—including the selling of lambs in New York." In that I stated two ventures in sheep and lambs that had been made by myself and my neighbor, Captain James B. Jones, in the years 1872 and 1873. The first of mine showed a nett profit in sales on each ewe that raised a lamb of 263 $\frac{1}{2}$ per cent.; and the second showed a similar profit of 237 $\frac{1}{2}$ per cent., against which any one might charge what expense account he might choose upon his own valuation of the items of such charge as I then gave them. The results of Captain Jones were the same as far as he went; but he kept his ewes over; whereas I sold mine each year at an advance of fifty per cent. on cost.

The results of this year are very different, as will appear from the following statement:

1874.

Apl. 15,	8 old sheep, barren, at \$4 per head,	.	.	\$32 00
May 15,	30 lambs, at \$6.50,	.	.	195 00
June 3,	767 lbs. wool from 184 sheep, nett,	.	.	194 15
" 9,	39 lambs, at \$5,	.	.	195 00
" 22,	41 " at \$3.50,	.	.	143 50
July 22,	22 " (sold in Richmond), at \$3.25,	.	.	71 50
" 10	" consumed at home, at \$4,	.	.	40 00
Oct. 13,	176 ewes on hand, at \$3.50,	.	.	556 00

Total,	.	.	.	1,427 15
Cost of 200 ewes, at \$3.50,	.	.	.	700 00
Interest from 1st October, 1873, to date, say				
15th October, at \$10 per cent.,	.	.	.	72 93
				<hr/> 772 93

Balance, \$654 22

which is, in round numbers, a little under one hundred per cent. on

the investment; against which must be charged feed, including pasturage and attendance.

Whatever others may think, I regard this as a comparative failure, as it comes so far short of what I have done before. The explanation of it is as follows: 1st. The price paid for the ewes was too high; 2nd. They were delivered to me at least one month after I should have received them; 3d. They were worried by dogs; and, 4th. The season was very unfavorable.

The ewes came to me, some too old and some mere lambs, though I had expressly stipulated for two or three year olds. In consequence of coming so late and in bad order, they were not impregnated in time to year in all the month of February and early in March. Once or twice they were worried by dogs, and though I lost very few from this cause, the scare affected their condition for a long time, so that they did not give as much milk as they otherwise would have done, though they were better fed than any lot I ever had. Then the season when the lambs should have been fattening was so wet that the grass was too sappy, as the graziers call it—a cause of bad condition, as my live-stock broker assured me, that extended clear to New York. And finally, like all other things, the tightness of the times affected the ability of consumers.

Contrasting the business, however, with the failure of the wheat crop this year, the failure of the oat crop, the reduction of the corn crop—from drought, cool weather, and chinch-bug—and the failure of my hay crop, which was burnt by incendiaries, I think I may assume that there are elements of certainty in results from sheep that are not to be found in any of the other staples I have named. In stating, therefore, the facts in this last venture, which is but fair to those who have been induced by my previous statements to look with favor on this branch of sheep husbandry, I see no reason to retract anything I may have said before, or to regret having said it. On the contrary, I am more and more convinced by each year's experience that this branch of farming has been too much neglected by us; and that in all its varieties it well deserves the attention of our people, each selecting that kind which best suits his peculiar circumstances.

FRANK G. RUFFIN.

FLY IN WHEAT.

It is a fact tested by experiments off and on for more than thirty years, not numerous, but sufficiently and satisfactorily made, that one or two,

not more, bushels of lime sowed over the wheat when the fly makes its appearance will destroy them. The like quantity repeated in the spring, utterly destroys them. That much lime cannot cost any one much, not more than from \$20 to \$40 per acre. The fly often costs us \$10 per acre, interest about 2,000 per cent. which beats that form of extortion, politely called banking, all to pieces. And then, on most soils, the lime is an independent benefit greater than its cost. Will gas-house lime answer as well? Can't say; suppose you try it.

DEBT AND TAXES.

As we think the financial condition of the State interests our farmers quite as much as dissertations on practical agriculture, and is really of as much moment to men, many of whom are likely to be sold out at any time to pay their taxes, we make no excuse for asking special attention to an article on that subject which, at our request, was furnished by a gentleman who has given the subject much attention. We were the more solicitous to get this article because his facts go to sustain our own conclusion, that not 3 per cent. of what is called the debt of Virginia can now be paid. And an attentive reading of the paper submitted, which deserves to be studied by every reader of the Planter, will, we think, lead all to this conclusion. If not, let us hear from the dissentient.

We heard a gentleman say the other day that he thought the price of coupons should be considered as a mitigation of the tax. Perhaps he did not know that some of the brokers had been making "corners" in them, whereby there price was enhanced; and he could not have heard of that princess of France, who when she was told that people were dying of hunger, said compassionately, "dear me! why don't the poor creatures live on bread and cheese?" "Your Highness," was the reply, "the poor creatures have not the money to buy bread and cheese." It takes money to buy coupons as well as bread and cheese.

DEBT OF VIRGINIA.

Charge of dishonesty preferred by creditors on the authority of her late Governor—Action of Council of Foreign Bond-holders—Virginia and Virginians to be excluded from the money marts of Europe—Charge of dishonesty considered—Result—What interest can Virginia pay?

The failure on the part of Virginia to meet the interest on her debt, and the resolves of the Council of Foreign Bond-holders to close the doors of European capital against her and her citizens, on

the ground that she is a *d shonest* debtor, *able* but not *willing* to pay her debts, coupled with a call by her Governor and Treasurer for a conference with her creditors in November next, invest with interest the enquiry into her real ability to meet her obligations.

Governor Walker in his financial message, March 8th, 1870, undertakes to show her ability, with a tax of 40 cents on the hundred dollars, to carry on her State Government, pay *six* per cent. interest on her ante-bellum debt of 46 millions, and *yet have a surplus in her Treasury*. Upon the faith of this message the Council of Foreign Bond-holders based their action, declaring that Governor Walker had afforded the most incontestable evidence of her capacity, and of the unwillingness to meet in full every liability.

Governor Walker's message has proved to be a most un eliable document, his figures of imagination having been overcome by the figures from the record, and his anticipations falsified by actual results.

The first noticeable fact is that, in 1870 (after the date of his message), the Legislature of Virginia raised the State tax 25 per cent., from 40 to 50 cents on the hundred dollars, (which received the sanction of Governor Walker), evincing, in the most practical manner, an honest desire and a sincere purpose to provide for her obligations. Yet, so far from verifying the Governor's prediction that 40 cents on the hundred dollars would maintain the Government, pay 6 per cent. interest on 46 millions of debt, and leave a surplus in the Treasury, the result has been a failure to pay 4 per cent. on 32 millions, the portion of the ante-war debt, which she assumes to herself; that is to say, Virginia has not been able to pay 3 per cent. much less 6 on her ante-war debt. But the Bond-holders still following in the wake of Governor Walker, declare that if the assessments of taxable values had been honestly made, his prediction would have been realized. The response to which is, first, that the assessments were made by sworn officials, skilled in that kind of business, with no inducements to make false returns; and, secondly, that the sales of property, both land and personalty, at public outcry, on terms of credit, rarely have realized the assessed values; and that judgment liens, amounting to millions upon millions of dollars, remain unsatisfied, because the lands will not sell for *two-thirds* of their assessed value—the law of Virginia forbidding the sale of land under execution for a sum *less* than two-thirds of its assessed taxable value. Assessments are and can only be made on the estimated cash value. It is hardly credible then that the assessments of Virginia lands are too low, since they rarely find a purchaser at two-thirds of their assessed values.

The Bond-holders assert, however, that if the assessments be fair and proper, still heavier rates of taxation should be imposed. Let us see. The records both of the Federal and State Governments are vouched to explain the measure of depreciation in the taxable values in Virginia, and to show that her people cannot bear a heavier burthen in the shape of taxation.

By the *Federal record*, the assessed value of real and personal property in Virginia in 1860, was \$917,117,852 and the estimated real

value was \$1,270,830,426, and in 1870, the assessed value was only \$365,439,917, and the estimated real value was \$409,558,133, showing a falling off in the *assessed* values of \$551,677,935, and in the real value of \$861,245,293. The record shows further that of the sum of \$551,677,935, the amount of \$446,310,076 represented the assessed or taxable value of personal property, and \$105,367,859 represented the taxable value of the land.

The *State record* shows that the value of the slaves manumitted by federal usurpation reached \$245,000,000: and it is an undisputed fact that this slave property was not only a marketable wealth and the most convertible of all property, but that it was the labor of the State, the cheapest and most reliable in the world, and that by the loss thereof the improved lands in Virginia were depreciated over one hundred millions of dollars in value, entailing a perpetual and continuing injury, which the State can neither avoid or repair; that this sum of \$557,000,000 at the then rate of taxation (40 cents on the hundred dollars), would maintain the Government and, within a fraction, pay 4 per cent. on 32,000,000 of dollars, and that the same rate on the \$861,000,000 the real value, could after meeting the expenses of Government pay 4 per cent. on the ante-war debt of 46,000,000.

But the records of the State show further that the assessment of 1873, (relied on by Governor Walker to prove the under assessments of the taxable values of the State) is \$30,000,000 less than that of 1870, and within two millions of dollars of Virginia's portion of the ante-war debt—making the present difference between the assessment of 1860 and 1873 of \$581,000,000: the taxable values of 1873 being only, in round numbers \$336,000,000.

The levies for the support of county and township organizations are more than double those laid by the State, and the Federal tax on agricultural productions is in excess of \$5,000,000 per annum. In pursuit of the enquiry, can Virginia bear heavier taxation? it will be proper first to arrive at the sum now paid by the people of Virginia in the shape of taxes.

The Federal Tax on Tobacco, &c.,	\$5,000,000
State Tax ($\frac{1}{2}$ per cent. on 336,000,000),	1,680,000
County and township levies (1 per cent on same),	3,360,000

An annual drain of . . . \$10,040,000

on a people, who have lost 60 per cent. of their properties, with their labor system destroyed, and their individual liabilities unsatisfied; a drain equal to 3 per cent. upon the taxable values of the State, and 30 per cent. of the market values of the productions of her soil, taking the yield of 1871 as the basis.

If the *real* value of the property in 1870 be considered, it would distribute \$334.31 to each head of population, which sum invested at 6 per cent. interest would yield \$20 per annum (it was \$80 in 1860.) Assuming five persons to a family, they would represent 100

acres of land (at the average price of \$12 per acre), and \$417 worth of stock, implements, &c. Two hundred and sixty thousand families (the population being 1,300,000) at 100 acres each would figure 26,000,000 acres, being 8,000,000 more than Virginia has in farm lands, 18,000,000 more than she had in improved land, and 24,000,000 more than she had in cultivation in 1871. Of her 18,000,000 acres in farm lands 44.9 per cent. only are improved, or arable acres, and of these, for the year mentioned only 225,000,000 acres were in cultivation. The investments in land, stock and implements were represented by 253,000,000, and the market price of the yield was \$33,000,000, equal to \$1.82 per acre of farm lands, and \$25 per capita of population. Deducting 66 $\frac{2}{3}$ per cent. for cost of cultivation, and the sum of 60 cents per acre marks the net income to the farmers.

In 1860 there were 92,705 farms in Virginia averaging 324 acres; in 1870 there were 73,849 farms averaging 246 acres, a decrease in the ten years of 18,856 farms and 12,000,000 of acres. The net yield of 60 cents per acre, multiplied by 2460 acres will give to the farmer \$147.60. The assessed value of this land, including the necessary stock and implements, was \$13.87 per acre, or \$3,412.02 as the value of the farmer's investment, on which \$147.60, his net receipts, would be equal to 4.33 per cent.

It has already appeared that the Federal, State, County, &c. taxes sum up 3 per cent. on the taxable values of the real and personal property of the State. Three per cent. tax on the farmer's investment taken from the net yield of his farm, 4.33 per cent., will leave to him only 1.33 per cent., or about 45 dollars; and this accords with the generally received opinion that the farmers of Virginia rarely realize 2 per cent. upon their input.

Again: In 1871, there was in corn two-thirds of an acre per capita of population, and the average yield was 22.6 bushels per acre, or 4.4 bushels per head, and the average market price was 67 cents per bushel, or \$9.64 in money value per head. In wheat there was three-fifths of an acre to each inhabitant, and the average yield was 8 bushels per acre, equal to 4 $\frac{4}{5}$ bushels per capita, and the average market value was \$1.39 per bushel, or \$6.67 in money value per head. But in the same year there were 1,429,400 head of horses, mules, cattle (exclusive of sheep and milch cows), and hogs, and allowing to each head only 20 bushels of grain, much less than is necessary for a thrifty keep, there was a demand for 28,588,000 bushels of grain for the live stock of Virginia, outside of her cities and towns—the whole crop, however, of corn, oats, rye, barley, buckwheat, and potatoes aggregated only 26,614,000 bushels, showing yet a deficiency upon the scanty allowance of 20 bushels per head of 1,964,000 bushels. So Virginia has to buy food for her farm stock, exclusive of sheep and milch cows, or they have to go without; as is really the case in a majority of instances. From the above number of live stock, not only are excluded the sheep (1,044,630) and milch cows (234,000) of the farmer, but the horses and all other

live stock within the cities and towns, which were fixed by the Department of Agriculture at 77,448 head (16,039 horses and 61,409 milch cows). Of wheat, as above appears, only $4\frac{2}{3}$ bushels per head (6,369,000 bushels) was raised, less than by $1\frac{1}{3}$ bushels than is allowed per head to the inhabitants of Great Britain. So Virginia has also to buy bread-stuffs for her people, or put them on short rations.

Again, the market value of the productions of the soil for 1871 was, as per report of the U. S. Agricultural Bureau, to be precise, \$33,302,092. There are 1,300,000 inhabitants in Virginia, of whom at least 800,000 are male adults. At a charge of 30 cents a day, it would cost to feed each man \$109.50 per annum, or \$32,850,000 for the male adult population, leaving \$452,092 to feed the one million of women and children, or 45 cents per head per annum, or about one-eighth of a cent per day.

But of this 33 millions worth of products, we have already seen that 10 millions are required in the shape of taxes for support of government—Federal, State, &c.—so that the proper distribution would be to each male adult 21 cents per day, and to each other person less than *one* mill per day. Thus the following propositions may be considered as established: That the assessments of lands in Virginia, whether tested by the products in kind, or marketable value, or by the more certain test of the unsatisfied judgment-liens, are not only not *below*, but in fact are *above* their marketable cash values: that Virginia does not raise grain enough to feed her people and their live stock; that if all of her productions of the soil were reduced to money at market rates, the proceeds would only feed 200,456 adults at 30 cents each per day, with nothing for the remaining population; that the farm lands, stock, &c., yielding only 1.33 per cent. net on their values, can bear not another straw in the shape of taxation; that it is a mere delusion to talk of grinding out of the farmers six per cent. interest on the State debt until blood can be extracted from turnips; that if full interest must and shall be paid, the means must come from some other source than the lands and personal property of the State (cities and towns included), assessed at 336 millions of dollars.

To reach this last result there must be raised on State account, per annum:

To maintain the government,	\$1,500,000
To pay 6 per cent. interest on debt of \$32,000,000,	1,920,000
	<hr/>
	3,420,000
By $\frac{1}{2}$ of one per cent. on assessed values of real and personal property, \$336,000,000,	1,680,000
	<hr/>
Annual deficit,	\$1,740,000

to be supplied from taxable subjects other than land and personal property.

The annual receipts from these other subjects can only be esti-

mated. In 1870 they amounted to \$577,156.93; in 1871, to \$398,963.17; in 1873, to \$570,561.57. The tax bill of 1874 imposed what is deemed an oppressive burthen on merchants, and added something to the former taxes on railroad, express, telegraph and insurance companies. In some of its features—in respect to merchants' licenses—it has been ruled to be unconstitutional, and though the case will go to the Supreme Court of Appeals, it is not likely that much will be realized from them. But ignoring all objections, and admitting that full collections will be realized under the tax bill, it would be an excessive estimate to expect as much as 50 per cent. advance on the receipts of 1873 from similar sources.

It will be observed that the receipts from the general taxes exceed the demand for the support of government by the sum of	\$180,000
50 per cent. on receipts of 1873 from special taxes,	855,842
Utmost to be relied on to pay interest on public debt,	1,035,842
3 per cent. on \$32,000,000,	960,000
Surplus to cover delinquents,	\$75,842

An unsuccessful attempt at revolution has deprived Virginia of two-thirds of her taxable values—destroyed her labor system—crippled all of her existing industries, some even to death—and estopped all new enterprises. In the pride of her poverty, her very efforts to meet her obligations have increased her liabilities and added to her embarrassments. In an earnest desire to maintain her honor, she placed 25 per cent. additional tax upon her impoverished, almost hopeless people, and yet, withal, it appears, if facts, figures and results can prove anything, that it is indeed problematical, with the greatest struggle, whether she can pay even 3 per cent. interest upon her debt. It is absolutely certain, unless there be some large advance upon her present condition, that she can pay no more. She must carry on her State government. She must maintain her county and municipal organizations. The Federal tax she must pay; her people must be fed and clothed; something must be allowed to meet individual indebtedness. All of these obligations must be met before the State creditor can reasonably expect the call for his interest to be answered. Virginia is not able *now* to meet and satisfy all, and it does not exactly appear how the depriving her of the means to utilize her present, and to create and prosecute new, industries, to develop her undoubted and inexhaustible hidden treasures, can hasten the happy time when, out of the abundance of her wealth, she can say to each and to all of her creditors, "Here is thine own, with usury." Capital is needed—population is wanted. With them her waste places will blossom as the rose—without them she must pine and dwindle—and finally must become a bankrupt to her own irremediable damage, and to the irretrievable loss of their debt to the bondholders. Possibly the Council of For-

eight Bondholders may see a virtue in binding Virginia hand and foot—in excluding her and her people from the money marts of Europe, as their fathers thought they did in casting their debtors into the fleet. As their fathers learned wisdom by their experience that imprisonment would not discharge a debt due by a friendless and impoverished debtor, possibly these descendants of theirs, in time, may find that they, too, have erred, and that policy, if not justice and mercy, would induce a helping hand to lift the unfortunate from the slough of misfortune and put him upon solid ground, from which he may take a new departure. Virginia is not a *dishonest*, but an *impoverished* debtor, struggling under almost insupportable trials to pay something, if not all. To treat her as dishonest, is as cruel as it is unwise—as unjust as it is untrue; and so the bondholders may find out when the knowledge may avail them nothing.

The writer is one of those who is for paying the debts of the State, who is willing to tax the people to their capacity to this end, and who would be rejoiced to believe that their ability was equal to their whole indebtedness. A careful examination into the question of her ability, in all of its phases, some of which are here presented, has satisfied him that the utmost limit of her present ability is measured by 3 per cent. interest on her public debt, and that it would be unsafe to undertake more.

A word to the bondholders, and we dismiss the subject. You know that every new way opened to market, every old industry enlarged, every new enterprise undertaken and successfully prosecuted, every new water-power utilized, every new mine opened, adds to the taxable values of a State. You know as the taxable values increase, so the capacity of the State to meet her obligations is enlarged; and so *e contra*. With such knowledge on your part, does a business intelligence dictate the help of a liberal hand in aid, or a stern, unrelenting policy in depression, of an already over-burthened debtor? This question is not to be solved by resolves, the result of disappointment, but upon the identical principles which govern merchants in settling with their unfortunate debtors. A sober second thought, resulting in a revocation of your edict of exclusion, and in extension of aid to all proper enterprises, will go much further to advance the certain payment of interest on your debt, and its retirement at maturity, than, we venture to say, the unwise policy which dictated your action in April last. * * *

[For the Southern Planter and Farmer.]

FAILURE.

Mr. Editor,—As very many valuable articles appear in your columns teaching us farmers how to succeed, you will pardon me for expressing a few thoughts relative to the most direct route to a complete failure in the pursuit of our calling. First, and important it is, that a farmer should buy more land than he can pay for, giving his bond for the deficit, with an obligation in some way assumed to pay at least ten per cent. interest thereon. Again, if he owns more land

than he can manage successfully himself, he should sell everything off the farm year after year, and continue to pay taxes on many superfluous and non-productive acres. Let quantity rather than quality be his motto. He should never produce his own supplies, bearing in mind that the merchant and the city will furnish him with far better articles. Just now it is so refreshing to the farmers of Henrico, and doubtless many other sections of the State, to pay the modest price of a shilling for bacon and a dollar and twenty cents for meal. Again, many small producers (and some large ones, too) haul their hay and oats to market in the summer, and the following winter buy it back again. Generally they receive about 75 cents per hundred, and pay, say from \$1.25 to \$1.50 for it. Of course, this is a paying operation. And it is just by such profitable management that so many succeed in *failing*.

Again, I would advise that produce be taken to the city in the greatest possible bulk—transportation, storage, and handling are *small expenses*. Never take it there in the shape of prime *beef, bacon or butter*. Lately the writer sold prime seed to a city merchant for 25 cents per pound; one of my neighbors bought some of the same seed from the merchant at 80 cents per pound. Don't grow your own seed. Facts prove we can save as good seed potatoes as any we can buy, but don't credit *facts*. Fancy you can't, and pay the merchant next spring as much for one barrel as he will give you for three a few months later. Never place any faith in stable manure, or try to save it yourself, nor in pure bone dust and lime.* Fancy guanoes and phosphates are far cheaper. Shut your eyes to the fact that the component parts of these latter articles on the average do not cost the manufacturer half what they cost you; never plow a field of green peas or clover under to improve your land; you can't afford it. Whilst on the subject of seeds, I should have stated that the most successful gardener in this vicinity saved this season from 60 heads of cabbage planted, not only his own seed, but sold enough to pay him 20 cents each for the cabbage. But don't you try it; recollect the merchant knows his business and ours too. He will tell you Northern or foreign seed are so much better; will mature so much sooner, &c. You attempt to argue, but he can beat you talking. He offers as your particular friend to let you have a liberal credit of say 90 days. You consider a second, conclude he is a jolly good-natured man, and your friend. *You buy* If you don't meet your engagements promptly, or you make your future purchases elsewhere, how soon his friendship and seeming good nature vanish! Facts prove that the farmer is more universally robbed of the honest fruits of his labor than any other class. But fancy and believe it is not true, or if true, can't be remedied. Lastly, don't take any papers, or read them if you do. If, however, you are determined to do otherwise, recollect that political papers

*What guarantee has Jack that the Bone Dust is pure? There can be as much fraud in that, and as much extortion as in any other sort of artificial fertilizer.—Ed.

are filled principally with the speeches of ambitious office-seekers, intent only on exciting the public mind to honor them with some office, for which they probably have no claims or qualification; whereas agricultural papers and journals generally admit to their columns only such articles as the editor thereof hopes may prove beneficial to the farmer; bearing in mind that his success in journalism depends upon the support he can derive from us as a class; he is, therefore, or rather his paper is, the medium by which our interests as a class are protected and advanced to the exclusion of others.

JACK.

EFFECT OF DROUGHT IN THE WEST.

The following extract from the regular Illinois correspondent of the Albany Cultivator, whom we have read after with pleasure for a good many years, is very suggestive.—[Ed.]

We are still in need of more rain, and the cattle and the pasturage are so disproportionate that few graziers and farmers have good grass for their stock. The whole Western country for this time of the year is sadly deficient in a surplus of agricultural production, and by the arrival of seed time next spring it will be about as bare as a desert.

Writing as long ago as July 28, with a full sense of the crop failure and consequent scarcity upon me, I said, (see page 500 current vol.): "Let the farmer in the West sell no old corn for less than 75c., and no new short of 50c. per bushel. New oats ought to be worth 40c. and wheat three times that sum. Every farmer should think the matter over before he accepts an offer of less than 7c. for live hogs, and 6c. for good fat cattle." Prices for grain have already reached these figures as an average, though hogs are not above 7c. in Chicago, unless they are very good, and there is as yet no new corn in the market; but sales have been extensively made at 40c. in the stook, standing in the field. What prices will be next May it is difficult to conjecture, but it is impossible they should be otherwise than high, beyond all recent experience. It is instructive to remember that at this time in 1872 old corn was worth 20¢-23c. per bushel, and other Illinois agricultural products in relative proportion. And another important fact for grain and produce buyers and dealers, and for such railroad managers as are something more than that, to bear constantly in mind is, that while railroads increase production to a great extent, they stimulate and increase consumption to an extent still greater. Thus as to the surplus which had accumulated in in this State the series of fruitful corn years, which terminated with 1860, it required, notwithstanding the stimulus of war, four or five years to dispose of it; yet the surplus of the grain-producing years ending with 1874 was taken out of the State in less than fifteen months.

The legal standard by which grain is sold in this State is—wheat, 60 pounds to the bushel; corn, 56 pounds; and oats, 32 pounds.

One day last week, wheat sold in Chicago at 98c., corn 82c., and oats 52½c. Estimating corn and oats at the standard weight per bushel of wheat, we have the following result.

Wheat, 60 pounds,	. . . . .	98 cents.
Oats, do.	. . . . .	98½
Corn, do.	. . . . .	88

Thus oats are worth per 60 pounds, 10½c. more than corn, and half a cent more than wheat, while corn is worth only 10c. less than wheat, and 10½c. less than oats.

Should the drouths which have characterized the last four years become a permanent condition—which there is great reason to fear—that condition, while it will largely increase the already immense wheat area, will correspondingly diminish the corn-growing one; and corn, instead of being cheaper per pound than wheat, oats or barley, will become the dearest of the four. The subject is an interesting one.

WHEAT WITHOUT MANURE.

Our readers have been frequently advised of what has been done by Mr. Lawes, of England, in the way of raising repeated crops of grain upon the same land year after year, both without and with manure. But Mr. Lawes' labors have been experimental. We have now before us a report of the sales of the standing crops of wheat, oats, and clover upon two farms in England, upon which these crops have been raised successfully for a dozen years, and sold standing, to be cut and carried away by the purchasers, both straw and grain together. No stock is kept upon these farms. No manure is used upon them. Deep plowing by steam, and draining to further deepen the soil, are the only means by which these crops are produced year after year. One of these farms is owned and cultivated by Mr. Prout, of Sawbridgeworth, and consists of 450 acres. The present season's crop was chiefly wheat, which, sold by the acre as it stood, realized from \$45 to \$89 per acre, for grain and straw. The purchaser in all cases does the harvesting. The average prices were, for wheat, \$54.40 per acre; oats, \$49 per acre; and clover, \$52 per acre. The whole proceeds of the 450 acres were \$23,141, an average of \$53.30 per acre. The average result of the last seven year's crops has been \$51.25 per acre. The farm was purchased twelve years ago, and was then in poor condition. It was drained, and \$4,000 worth of chemical fertilizers were used to bring it into a producing state. Since then it has been cultivated deeply by steam each year, but no fertilizer has been used, nor has the straw even been retained upon the farm. The other farm is owned by Mr. Middleditch, of Wiltshire. It has been managed upon the same plan. The crops upon this farm brought from \$18 to \$86 per acre, on an average of \$55. The aftermath of some fields of sanfoin, which were to be pastured by sheep, sold for \$10 to \$18 per acre. There are 500 acres in this farm. Both farms have a clay soil,

and are fairly good wheat lands, but at the commencement of this cropping were much run down. The farmers who purchased the crops, and some who had taken them for several years, said that those of the present year were the best crops for several years, and Mr. Prout expressed the opinion that he could thus farm "as long as he lived, and his son after him." We do not pretend to make any application of this anomalous kind of farming, but merely give the facts. At the same time we cannot refrain from comparing it with some farms we have seen, in the rich valleys of Ohio and westward, where for twenty years the merest scratching of the deep, rich soil, and the raising of wheat upon the unplowed corn-stubble, year after year, has made farmers comfortable, if not rich, and thinking at the same time it is possible, if those rich lands were better treated, and farmed more with the plow, and less with the harrow, that they might produce better crops than they now do, and remain profitable to their owners for an indefinite number of years to come — *Exchange*.

WHEAT IN CALIFORNIA.

The large proceeds of the sale of wheat in the last two years have contributed greatly to the present abundance of money in California. The San Francisco *Atlas* speaks as follows on the topic: In two years, ending with June, the amount of money realized for wheat has been in round numbers \$40,000,000, which has enriched nearly all parts of the State, and added to the immense production of the mines, only two of which have given \$30,000,000, against very little in the two previous years, making of wheat and the produce of two mines only, a result of \$70,000,000 in two years, against \$16,000,000 from the same sources in the two previous years. This shows a very large addition to the money capital of the State. Other branches of agriculture and other mines have produced also largely, but we call attention to but two sources. There have been undoubtedly, losses in some of the mines, and many farmers have, even in a prosperous year, lost money by injudicious handling of the crops—that is by making experiments on interested and unsound advice—but, nevertheless, the whole value realized for the bullion and wheat has added to the resources of the State, and the new crop year opens with a larger supply of both wheat and bullion in prospect.—*Exchange*.

(For the Southern Planter and Farmer.)

RED CLOVER THE CHEAPEST AND BEST FERTILIZER.

That the Red Clover plant is the cheapest and best fertilizer, is established by the evidence of both practical men and men of science.

1. *Practical men say so.* Mr. Hill Carter, of Shirley, in giving to the *Southern Planter* in 1870 the results of fifty-four years' experience in farming says: "Clover is the basis of all permanent improvement on our lands. If plaster acts well, I can, with clover, make land rich enough for any crop. I never knew a good clover ley fail to make a good crop of wheat. Clover is good manure above and under

the ground both, the roots as much as the hay or summer growth. All I ever made was by clover and plaster." Mr. H. M. Magruder, of Albemarle, reported to the same Journal last year the instance of a farmer in his county who had grown large crops of wheat for twenty years continuously by alternating clover with wheat. He obtained a stand the first year on thin land, by the application of Peruvian guano, but afterwards used no other manure but plaster. The leading farmer of the North, the veteran John Johnston, has most successfully alternated clover with wheat, heavily manuring his wheat with farm-yard manure, and applying plaster to the clover. An Orleans county, N. Y., correspondent of the *Country Gentleman* in proof of his exalted opinion of the beneficial effects of clover as a fertilizer, cites numerous instances and facts that have come under his observation, and that have been noticed by trustworthy farmers. He says: First—in regard to wheat: I can name quite a large number of fields of wheat that have ranked among, if not ahead of the best crops in this section, where it was very plain to see that good or extra crops were mainly due to the excellent effects of growing clover. The average yield of their crop ranges from 20 to 45 bushels per acre, mostly varying from 25 to 40 bushels per acre. Wheat and clover are frequently grown alternately, until the land is so rich or full of vegetable matter that wheat lodges badly. Similar results have been realized in growing corn. Ploughing under a good clover sod, generally without other manure, except in some cases a dressing of plaster and ashes in the hill has given from 100 to 150 bushels of ears to the acre.

One of the very best examples of making and keeping land very rich by the growth of heavy crops of clover, of which I have seen any account, is the farm of Mr. George Geddes, of Onondaga county, N. Y. It appears, by different accounts, that a large portion of this farm has been in constant cultivation over 60 years, without any other manure than clover and plaster; and that the fertility and productiveness of the soil has been constantly increasing. In referring to the practice of manuring with clover, in the discussion at the State Fair at Watertown, in 1861, Mr. Geddes stated that "he thinks clover manure of the utmost importance. It gives a crop of corn that needs no hoeing, but horse cultivation only. Has thus raised 67 bushels to the acre, and the land was left cleaner than in other fields with hoeing. Clover also forms an excellent manure for other grain crops, oats, barley or wheat. Has had wheat on clover sod at the rate of 33 bushels per acre for 20 acres, and regarded the clover at the bottom of this heavy product."

Hon. G. W. Patterson, then Lieutenant-Governor, is represented as saying in the Legislative Farmers' Club (Trans. S. Ag. So., 1849, p. 660) that the cheapest manure for wheat is clover, though he would use all of the manure from the barnyard. Considers a good crop of clover equal to 20 loads of ordinary yard manure per acre. Could never see that plaster benefited the wheat, but it makes the clover, and the clover makes the wheat. His wheat crops have sometimes been 40 bushels per acre on 60 acres.

Mr. D. A. Nichols (Cultivator, 1858, p. 357) states that of winter wheat he "had $4\frac{1}{8}$ acres, and harvested $154\frac{1}{2}$ bushels, or 31 bushels and 27 quarts by measure per acre, or 33 bushels and $13\frac{2}{3}$ quarts by weight—50 lbs. per bushel. In 1847 it yielded $8\frac{8}{10}$ bushels of wheat per acre; but by sowing plaster and turning under clover, it has reached its present fertility."

In the *Country Gentleman*, December 13th, 1860, it is stated a Mr. Goldsboro, of Ellenboro, Md., had "a field of $27\frac{1}{2}$ acres, that yielded 55 bushels of wheat per acre; it was grown in a rotation of corn, wheat and clover."

In the Transactions of the New York State Agricultural Society for 1858, is an account of nearly five acres that had been in clover and mowed two years, that well plowed the last week in August, and without any other manure gave a yield of $33\frac{1}{2}$ bushels of wheat per acre. Evidence of the same character could be further extended if space allowed.

2. *Scientific men say so.* It will be sufficient to cite the evidence of Dr. Voelcker, Chemist to the Royal Agricultural Society of England, and the highest living authority on scientific agriculture. In a lecture delivered at the rooms of the Society in May, 1868, he gave a report of his field experiments with the clover plant and attendant chemical investigations. Among many other things of the greatest value he said:

"It is well known to most practical farmers that if they can succeed in growing a good crop of clover, they are almost certain to get a good paying crop of wheat. You see how all agricultural matters depend upon each other. If we can by chemical means enable a farmer, on land which otherwise would not grow clover, to produce a good crop of clover, we shall thus place him in the very best position for afterwards obtaining paying crops of corn. *I have come to the conclusion that the very best preparation, the very best manure, if you will allow me thus to express myself, is a good crop of clover.* Now at first sight nothing seems more contradictory than to say that you can remove a very large quantity of both mineral and organic food from the soil, and yet make it more productive, as in the case of clover. Nevertheless it is a fact, that the larger the amount of mineral matter you remove in a crop of clover, and the larger the amount of nitrogen which is carried off in clover hay, the richer the land becomes. Now here is really a strange chemical anomaly which cannot be discarded, and invites our investigation, and it is an investigation which has occupied my attention, I may say, for more than ten years.

"I believe a large amount of mineral manure is brought within reach of the corn crop by growing clover. It is rendered available to the roots of the corn crop, while otherwise it would remain in a locked-up condition in the soil, if no recourse were had to the introduction of the clover crop. Clover by means of its long roots penetrates a large mass of soil. It gathers, so to speak, the phosphoric acid and the potash which are disseminated throughout a large por-

tion of the soil, and when the land is ploughed, the roots are left in the surface soil and in decaying they leave in an available condition the mineral substances which the wheat plant requires to enable it to grow. Although in clover hay these mineral matters are removed in great quantity, yet the store of mineral food that we have in six or twelve inches of soil is so great that it is utterly insignificant in comparison with what remained; in other words, the quantity of mineral matter which is rendered available and fit for the use of the succeeding crop is very much larger than the quantity which is removed in the clover hay.

“But the accumulation of nitrogen after the growth of clover in the soil is extremely large. Even when the clover crop is insignificant, a large quantity of nitrogen amounting to tons is accumulated in the surface soil, and the better the clover crop the greater is the accumulation of nitrogen. The accumulation takes place chiefly in the surface soil, and I believe it is principally due to the droppings of the leaves. When we grow clover for seed, those leaves continually drop and enrich the surface soil; and if it be the case, which I think is likely, that the clover tube of plants is satisfied with the ammonia which exists in the atmosphere, we can at once account for the accumulation of nitrogen in the soil. The clover plants take the nitrogen from the atmosphere and manufacture it into their own substance, which, on decomposition of the clover roots and leaves, produces abundance of ammonia.

“The clover roots and leaves are not all at once changed into ammonia; but there is a gradual transformation of the organic matter, first into ammoniacal salts, and a gradual change from ammoniacal salt into nitrates resulting from oxidation, and you have a complete series of chemical transformations which is highly conducive to the gradual development of the plant. Nitrate of soda may readily be washed out; but you will notice that the benefit that you obtain from clover roots is that you have a continuous source from which nitrates can be produced. I should like more indirectly to accumulate nitrogen on my land and not go to any great expense in buying nitrate of soda when my land is in poor condition. In reality the growing of clover is equivalent, to a great extent, to manuring with Peruvian guano; and in this paper of mine I show that you obtain a larger quantity of manure than in the largest dose of Peruvian guano which a farmer would ever think of applying; that there is a larger amount of nitrogen accumulated in the first six or twelve inches of soil, than there is in the heaviest dose of Peruvian guano that any person would think of using.”

3. *How to secure a stand of Clover.* If the soil is too poor for clover, it must be enriched up to the clover bearing point by means of one or two crops of peas or by application of manure, domestic or commercial. The most profitable application of the costly artificial fertilizers is to use them in obtaining a good set of clover, then with care the land will continue to improve. The seed should be applied

thickly, say two gallons to the acre, and will be surer to stand if rolled in plaster. Then sow after oats—the oats being seeded thinly, say one bushel to the acre. Some have been more successful by seeding after barley or buckwheat, and some prefer to sow the seed on wheat, but it is believed that the seeding with oats is most convenient to farmers.

Sow a bushel of plaster to the acre on the young plants the first season, and the same quantity the second year. Plaster has often been known to double the yield of clover. All the farm-yard putrescent manure of the farm should be applied upon the clover of the second year when it first begins to show the influence of spring in its growth. The clover is thus enabled to enlarge its leaves and roots, and draw more abundant supplies of nitrogen from the air and mineral manure from the soil and subsoil.

This mode of application was ably recommended by the late eminent agriculturist, Edmund Ruffin, in his writings and exhibited in his practice. It has received the approbation of the most successful farmers of Virginia and other States.

On poor, sandy soils the addition of the salts of potash, say 2 cwt. or 3 cwt. of Kainit would be a very material aid to other manures, as such soils are deficient in potash.

Dr. Voelcker found clover most improved by mineral manures. In his experiments, and in those of Lawes and Gilbert, it was found to be benefited by the application of nitrogenous manures.

A.

IN AND IN BREEDING.—The Western Farmer says Mr. George Butts, of Manlius, N. Y., has practiced in-breeding of Short-horns to a greater extent, perhaps, than any other American breeder. His bull Treble Gloster was sired by Apricot's Gloster, dam a heifer sired by the same bull as had been her dam. Treble Gloster was bred to his own dam, and the result was a fine heifer. He was then bred to this heifer, and the produce was an extra fine heifer—May Beauty. He is now breeding Treble Gloster to all females in the herd without regard to relationship. If the cow to which Apricot's Gloster was first bred had no relationship to him, the heifer, May Beauty, has 27-32 of his blood.

This reminds us of the success of Mr. Levi Ballou, of Woonsocket, R. I., who bred from one pair of pigs ten years without introducing any fresh blood. Over a thousand pigs were raised during the time, and without producing a single imperfect specimen.

NATURE is sent to teach us by her autumnal parables: and every fading leaf on every tree, with its bud of future growth hid behind it, becomes a solemn text, warning us to "secure while the leaf is yet green, the germ that shall live when the frost of death has destroyed both fruit and flower."—*Macmillan*.

THE POSITION OF WINDOWS IN HORSE STABLES.

We find in a German exchange some curious observations on the manner in which the position of the windows in the stable affects the eyes of a horse. In one instance the horses of a farmer,—fine animals, celebrated for their excellent condition, were kept in a stable lighted only by a small window at one side. When light was needed for work, the door was temporarily left open; the result was that nearly all of these animals had eyes of unequal strength, and in time a number of them became blind on the side toward the window. A strong light directly in the horses' faces has been found to weaken the sight. The worst position of all for a stable window is in front of the horses and much higher than their heads. An officer had bought a perfectly sound mare from a gentleman whose stable was lighted by windows at the rear of the stalls. The animal was sound and perfectly satisfactory. After three months she became suddenly "ground-shy"; on examining her eyes they were found directed upward, and this was explained by the fact that the windows of the officer's stable were situated above the head of the stalls, the eyes being generally drawn in that direction. She was removed to another stable, where the light was admitted from all sides, and in three months the difficulty had disappeared.

Another officer reports that during the campaign of 1870, in France, he rode a horse that was a capital jumper. On his return from the war, he placed this animal in his stable, the windows of which were above the front of the stalls, and in a short time the horse became so shy of the ground that he had to sell it. He had had a similar experience with other saddle-horses, all of which became ground-shy in his stall. One animal in particular, a thoroughbred mare, renowned for her jumping qualities, refused in a short time to cross the smallest obstacle, and when forced to cross a foot wide gully, made a leap that would have cleared a ditch fourteen feet wide. Owners of horses who find that their animals shy at objects on the ground, or at their side, would do well to look to the windows of their stables for an explanation of the evil.

[For the Southern Planter and Farmer.]

EXPERIMENT TO TEST THE PROPRIETY OF PULLING FODDER, AS COMPARED WITH CUTTING UP CORN.

In the July number of your journal for the year 1872, there is a report of an experiment made on fodder-pulling, ordered by the Hillsboro Farmers' Club. It was made to test the truth or error of the almost universal opinion of farmers that gathering fodder lightens the corn. Three lots of corn were selected in a field, as near equal as possible. One was cut off at the ground and put up in a shock; the next one was left with tops and blades all on; and the third had blades and tops taken off. These three lots were kept separate and housed, and the spring following they were shelled out and carefully weighed

when this rather unexpected result was obtained: the corn that had the fodder taken off weighed 59 lbs.; that left with fodder all on weighed 58 lbs. 8 oz.; while that which was cut and shocked weighed only 56 lbs. 2 oz. In your "Notes for the Month," September number, 1874, which I have just received, you say it is injurious to the corn to pull the fodder, and you recommend cutting the corn up by the roots. Did you get your idea from actual experiment, or did you adopt it because the old farmers all say it is so?

Your correspondent "R" in the last number of the *Planter and Farmer*, writing on the subject of "Winter Food for Stock" says he always has his fodder pulled, but he *knows* it "lessens the yield of grain and lightens the weight." Permit me to ask him how he came to *know* that? Was it the settled opinion of all the old experienced farmers, based on their scientific knowledge of the principles of vegetable circulation? or did he prove it by actual experiment? In these days of experimenting it is well to try the old theories by actual test, and especially where there is so much to be lost or gained as in saving fodder, and where the test is so easy and so unmistakable as in fodder saving. The test we made shows that the grain is not only *not made lighter*, but that it is made nearly three pounds *heavier* to the bushel than when cut off at the root and shocked—an increase that would pay well for the labor of saving the fodder, giving you the fodder as a clear gain, and I suppose this result would be uniform under any class of circumstances, including the variation of seasons.

S. M. SHEPHERD.

Albemarle Co., Va.

THE BUTTER TRADE.

The New York *Times* condenses from the report of the committee appointed by the Produce Exchange in New York to regulate the butter trade. After showing that the annual consumption of butter in this country is 1,040,000,000 pounds for table use, and one-third as much more for culinary purposes, it says:

In addition, the exports are estimated at 53,333,333 pounds, making the product aggregate 1,440,000,000 pounds, which, at thirty cents per pound, amounts to \$426,000,000.

The importance of facilitating the dealings in this immense amount of produce is obvious. Hitherto there have been various irregularities and difficulties which need correction.

The first and most serious irregularity existing was the erratic and conflicting market reports consequent upon various classifications of which there were nearly as many as there were merchants. The various grades were defined by one class as "fancy," "fair to good," "poor to fair," and another class "good to choice," "fair to prime," &c., with quotations attached to suit individual interests without representing the general market. Press and circular market reporters were compelled to adopt scattering and conflicting terms

and quotations as best they could gather from the different merchants and branches of the trade.

The term "Orange County" used in the market reports with the highest quotation attached, has constantly misled. The quantity of butter made in Orange county is but a trifle, and is still decreasing, and considerable of that is of inferior quality. This term, Orange county, has of late years been made use of in connection with the pail butter trade which was formerly confined to the jobbing and retail business, and the supply was mainly from Orange county. It was customary for the dealers in it to raise or lower the price five cents per pound, and by quoting it in the general market reports gave the impression that a radical change had taken place in the New York market for butter from all the dairying sections, whereas it sometimes occurs that the radical change of five cents per pound made in Orange county, does not affect materially the price of the bulk of the stock.

Within the past few years the trade in pail butter has gradually changed, and it is now received from all dairy sections of New York, New Jersey, and Pennsylvania, by wholesale houses, and much of it is sold by the invoice, the same as other classes of butter. So much of the product is being marketed in this manner that it constitutes a material feature of the market and market reports. But it is only a very small proportion of the butter crop of the country or of the supply in this market, hence the action of the wholesale dealers on Exchange, resulting in this class of butter being sold and quoted like any other grade, and ignoring the absurd system of raising or lowering the price five cents per pound at any change.

The terms "Goshen Butter" is likewise a misnomer in the classification of butter, and is so understood in this market, and is only in use and abuse in connection with the Southern trade, where from custom this brand is insisted on as designating genuine Goshen Butter, whereas there is no such article in the market, and from common custom and usage the name is generally applied to all kinds of butter distributed to Southern trade.

Your committee, after thorough consideration, have adopted the classification submitted. It first classifies butter as Eastern and Western, and next into Extras, Firsts, Seconds and Thirds, of each. Eastern constitutes the supplies from the Eastern States, and Western is the product west of New York and Pennsylvania. This is necessitated by the wide differences in the qualities and prices actually existing between the productions of the Eastern States and the bulk of those supplied from Western States. This method of grading by Extras, Firsts, Seconds and Thirds is simple, practical, and not experimental, it having been long in practice in older countries.

The general division of butter into Eastern and Western recognizes what already has always existed, and without detriment to either section, especially so under the new classification, since it is the same for both Eastern and Western, and the prices obtained and quoted will more surely determine and represent the quality and

value as a guide to the producers of the two great dairying sections.

While the importance of and rapid improvement in dairying in the West is fully recognized and encouraged, still there exists so wide a difference in the quality of the general productions of the two sections as to require a division in the classification in order to do justice to both. To place all Western upon the same basis as Eastern would result in a comparatively small portion of it being sold and quotable at the price of State, and at the same time tend to misrepresent the actual market value of the great bulk of Western butter. This is a question of so much importance and so little understood, that the reason should be here fully explained, and set forth for the first time under the authority of the Exchange of the difference in quality between Eastern and Western butter. In order to explain it and encourage improvement in Western dairying in the adoption of the best method and process of manufacturing, it is necessary to describe the system of making and other circumstances that cause the differences in quality generally in the productions of the two sections. In the Eastern dairy States, as the cultivation of cereals become less profitable and lands enhanced in value, the demand for dairy products increased, and being more profitable lead to special attention to their production as a main source of income. Extensive and improved herds were introduced, the pasturage was by cultivation freed from weeds and wild grasses, and close turfed meadows of the finest grazing were afforded, and the springs and streams of water purified by changes. These are indispensable conditions for the production of choice dairy products. Skilled manufacturers were employed, and from large herds greater masses of the product were yielded, and being consequently less exposed to the atmosphere, whether packed for future use or marketed immediately while fresh, was superior in quality.

One creamery dairyman in the State of New York during the season of making, markets 15,000 pounds per week, and at an average of 37½¢ per pound realizes \$5,625 weekly. One farmer in this State annually markets his season's product in this market toward spring. Year before last it aggregated 22,136 pounds, from which he realized 50 cents per pound, or \$11,068. The celebrated fine State dairies held in reserve for winter market are made only in the finest dairy districts, are most skillfully and perfectly made, and packed in uniform packages, numbered as packed, and kept in good dairy cellars expressly fitted, and in many instances cooled by running streams of water. Until this system of dairying, with the requisite conditions of pure water and grazing are introduced in the Western States, their product will not compare with that of the Eastern States. This can be accomplished by increasing and improving the herds and grazing, and the adoption of the New York dairy system, or by the creamery system of taking the milk, where the dairies are small and scattering to a common factory for the manufacture of butter of a uniform quality, the same as the factory system in cheese-making.

Of Western butter arriving in this market, it is estimated that less

than two per cent. is made on the system followed in the State of New York. In the Western States, as a whole, the herds are comparatively small, and the water and grazing in many sections impure. The butter is gathered in small parcels, and reworked together in order to have it uniform in character, all of which is more or less injurious to its keeping qualities. While great strides of improvement have taken place to the extent of an enhancement of its market value, some forty per cent. in two or three years, there is still room for great progress by the adoption of the Eastern system, and co-operation with the transportation companies in recommending and encouraging improved facilities for safe and quick transportation. For it should be remembered that the Western products have a serious difficulty to overcome in being transported from 1,000 to 2,000 miles, to which the Eastern butter is not subjected. Already in many dairy sections of the Western States qualities are produced nearly equal to Eastern, and give evidence beyond question that if made and marketed by the same process would be quite as good.

No greater service can be rendered to the Western farmers than the dissemination of these facts in relation to the production of dairy products, and the financial and commercial interests in connection therewith. The farmer who labors throughout the season to produce a crop of grain from a middling-sized farm situated distant from the railways or markets, has the bulk of his crop absorbed in transportation to the railroad and to the market. One bushel of corn fed to milch cows yields two pounds of butter, worth in New York, say fifty cents. A car load of corn containing 20,000 pounds, or 359 bushels, pays \$90 freight from Chicago here, and at present prices realizes \$385.60, and, less freight, nets \$195.60. A car load of butter, containing the same weight, pays \$220 freight, and realizes at 25 cents per pound, \$5,000, or nets \$4,780. In other words, corn pays 33 per cent. of its value for transportation and butter five per cent.—*Rochester Rural Home.*

POTATOES AND MUCK.—I find that in this very dry season potatoes only yield well when there is most vegetable remains in the soil. No matter how much you ameliorate a clay loam with sand it becomes so hard in very dry weather that potatoes can only be dug with a fork; and it is only where vegetable matter is in such force as to keep the soil loose and moist that large potatoes are grown; and although a sandy loam is better than clay for potatoes, yet sand without decomposing vegetable matter is no better than a rich loam.—*N. Y. World.*

THE farmers of the United States annually expend \$20,000,000 in reaping and mowing machines. The annual production is estimated at about 125,000 machines.

[For the Southern Planter and Farmer.]

FARM PENS.

Having been a constant reader of your valuable paper for a year, and not seeing any thing on the above subject, I have thought to give you my ideas upon it. In my section most of the farmers would be at fault to give the meaning of Farm Pen; yet how important for all good "Live" farmers to know what they are and to adopt their use. Most men say that if they feed their provender upon the land, it will finally find its way back into the soil. This is all true, or may be so, but not all that they may be able to say about it, if they were to think a little or notice some. Now when the plan of feeding on worn-out places here and there upon a farm is followed, it is true that some, and very often marked results are obtained, but even then a good deal of manure is washed off of the land and is deposited on land that does not need it. Now to prevent this waste of manure I propose that I put up a good pen, sufficiently large to pen all my stock, not excepting sheep, in which I feed all of my long feed, so that the stock may tread it down and mix it through and through, and any droppings that may find lodgment there; in fact I prefer keeping my stock penned from the commencement of feeding time (which will vary with locality) till, say from the 1st to 15th of May—save when being driven to and from water; by this system one can save a good deal of manure, for the stalks of corn which do not rot if scattered upon the land becomes cut up by the hoofs of the cattle; and if it does not make very good manure, it mixes with that which is good and helps to increase the bulk. By hauling leaves and weeds that have been cut before the seed ripened and throwing into the pen when need to keep the stock in a good bed, much more manure can be made, and when it is made you have it all in one place, so you can take it to such thin spots as you may intend to put in cultivation, thereby saving a good deal of manure that would, as I have said before, be washed on to places that did not need it. I do not know how much a man could save by feed, say 5 head of cattle and 25 sheep in this manure, but I feel confident that he who tries it one winter will find that he will save enough to manure ten acres of wheat land better than he could were he to use a ton of 60 dollar guano, and that it would not cost one half, counting the time it takes him to put it under shelter in the spring time to await seeding time. How many of the readers of your paper will profit by these rambling thoughts this winter? Many I hope. Try the Farm Pen farmers for a few years and you will force the fertilizing men "to shut up shop," for you will buy no more such stuff. I have tried both, and I am rooted and grounded in my faith of the good of one and the bad effects of the other.

"KEASTOR."

Will "Keastor" favor the Editor with his address. A blurred post mark prevented him from getting it from that.—ED.

NEARLY TWENTY-EIGHT TONS OF GRASS FROM SEVEN ACRES OF LAND.

The following remarkable statement is from the Watertown (N. Y.) *Times*, of a yield of grass from a meadow that has been seeded down 30 years, belonging to Mr. John Gifford:

“Mr. John Gifford, who owns a farm two and a half miles from this city, believes he has in his practical experience very conclusively solved two or three important problems in agriculture. When he went upon his farm in 1844, it was almost valueless as a grass farm, and after working it a year or two, and finding it impossible to ‘make the two ends meet,’ he got discouraged and came near giving it up. While trying to sell he encountered a gentleman who had spent a considerable time in Europe, and who advised him to try this plan of fertilization: To spread four loads of common barn-yard manure on every acre of his meadows every year and on alternate years, one bushel of plaster to the acre. Mr. Gifford adopted this suggestion and has acted upon it ever since. He gets out his manure in March, if possible. He is not a believer in rotting manure, but thinks it should be applied while green. The plaster assists to decompose the manure, as does a wet season. For this reason the present season has been a favorable one. The manure should be finely pulverized, as it may be when plaster is spread with it. Mr. Gifford has followed this plan for over 30 years, and the result is his yield of grass has been very large, and some years immense. This year the crop is an extraordinary one. He must have many acres which will yield three tons to the acre; he has meadow land on which there was scarcely any clover a year ago, but which contains nothing but clover now. Mr. G.’s idea is that a field that has once been seeded to clover continues seeded for all time, and that in favorable seasons, such as the present has been, the clover will come up on lands treated as above described, assert its supremacy, and choke out whatever else may be upon the soil.

“As already stated Mr. G.’s impression is that a meadow once seeded does not require re-seeding. If farmers will only be careful to return what they take from their lands—to restore as much as they take off—they can be kept up for an indefinite period. This, at least, is so, that Mr. G.’s meadows are in a better condition than they were 25 years ago. He has one piece that has not been plowed in 45 years, and it makes two tons to the acre this year. If this theory is correct, what an immense saving would be effected in the matter of grass seed. Some farmers are constantly plowing and re-seeding meadows at a very heavy cost. Instead of doing this, Mr. G. applies his manure and plaster, and takes off his two or three tons per acre year after year. Mr. G. has tried his system on his plowed lands with similar results. He has a magnificent crop of corn—one of the handsomest in the country.”

Four persons out of five in Switzerland are landed proprietors.

ADDRESS TO THE FARMERS OF VIRGINIA AND NORTH CAROLINA.

We publish below the address of the Farmers' Council, which it will be seen convenes in Petersburg on the fourth Tuesday in this present month. We hope there will be a full attendance, a full determination to do something, and a great success in doing it. Properly organized and conducted, the Farmers' Council ought to be of great service to agriculture. And now that it has had time to become organized, and it is natural to expect it will do something with the fine working material it contains, it will be a reproach to its members if they do nothing. We hope for the best, and will cheerfully co-operate in their efforts, which, we presume, will be sensible, practical and energetic.—[Ed.]

OFFICE OF THE PRESIDENT OF VIRGINIA AND NORTH CAROLINA,
PETERSBURG, VA., October 8th, 1874.

To the Farmers of Virginia and North Carolina :

I beg leave to remind you that the annual session of our Council will be held in the city of Petersburg, on the 4th Tuesday in November, 1874.

The organic law of our association provides for representation from every county and city in the two States. Each township and each ward are entitled to two delegates, or a larger number at their option, and as many alternates to act in the absence of their principals. It is provided in the Constitution that the delegates first chosen thereunder were to be elected on the 1st Saturday in October, 1873, or as soon thereafter as practicable, and every second year thereafter. Under this arrangement, 250 delegates were accredited from Virginia, and 28 from North Carolina, to the first annual meeting, under the permanent organization, which assembled in Petersburg in November, 1873. Quite a large number of delegates were in actual attendance. It was a matter of regret, however, that many portions of both States were unrepresented in the body.

In the opinion of your President it is not too late for all constituent bodies desirous of participating in our farmers' movement, to do so at our approaching session. Where elections have been once held and delegates chosen to the extent of the constitutional number, the power of election is exhausted during that term. But in many counties and cities of both States, no action seems to have been taken, looking to representation in the Council. In such cases, it is still competent for the farmers in those localities to choose their delegates at any time, whose term of service will continue for the unexpired period of the existing Council and until their successors are chosen. I, therefore, most earnestly suggest to the great body of farmers in both States, still unrepresented, the propriety of proceeding at once and without delay, to fill up their delegations. I would, also, most respectfully and emphatically, urge upon all delegates chosen and

hereafter to be chosen, the duty of attending at our next meeting. I need not remind you of the fact that there exists a serious crisis in our agricultural fairs, the solution of which requires the most enlarged consideration. And while I do not arrogate for the Farmers' Council a wisdom and power superior to other kindred and organized bodies looking to the farmer's welfare, I may, without presumption, assert its equality of title to respectful consideration and further trial. Its source of power and mode of organization, proceeding from the fountain head of all representative authority, are features that strikingly recommend it to popular sanction, and invoke in its behalf the public interest. It was not organized in any spirit of exclusiveness or purpose of hostility toward any existing association professing to advance the general good of the farming community. Nor was it designed to dictate terms of peace and fraternity between itself and the other classes of the business community. In a broad and catholic spirit, its doors are wide open for the admission of the various industrial interests of the two great States whose associated names it bears. Here all may meet and consult on matters of general concern.

While the organic interest is, by our organic law, justly accorded a preponderance, others more remotely interested in the great work of agriculture are not excluded from participating in its deliberations.

A discriminating public will not fail to observe that the Farmers' Council of Virginia and North Carolina differs essentially and materially from all other agricultural bodies with which our people are familiar, in this, that it has no power or authority to enlarge its own membership; that it cannot determine by the exertion of its own will and pleasure, whether it will "live or die," "survive or perish." The decisions of these questions abide and remain with the constituent bodies. If they feel no concern for the healthy vitality of a Farmers' Council, because it has no authority to enforce its decrees; no monied funds constantly and regularly accruing to work in its behalf, and no spells with which to charm and bind its members; if they choose to abandon the child of their own creation for every real fault or imaginary weakness which may be imputed to it; if they prefer to build other structures and hold other councils under more captivating names, it is their unquestioned right so to feel and act. As for myself, I cannot perceive or recognize any real antagonism or even competition of a hostile nature between a "Farmers' Council," composed of delegates chosen by the body of farmers, without reference to any particular creed or ritual, and the "Order of Patrons of Husbandry," which seems to be drawing within its expanding circle a considerable portion of the farming community. There is nothing that I know of, in the objects and purposes of either, that need interrupt their cordial co-operation for the good of their patrons.

The enquiry is sometimes propounded by very intelligent farmers, as if doubtful of the answer, What will become of the Farmers' Council? Will it continue to maintain an independent existence or

will it become merged in the Order of the Granges? A little reflection and a slight examination into the modes of their respective organization will satisfy the curiosity of the speculative and dissipate the fears of the doubtful mind.

The Farmers' Council being a representative body, proceeding from the whole people, has no authority, express or implied, to abdicate in favor of any successor. If its members—its delegates, choose to connect themselves in their private capacity with any other order or association, they can do so—as many have already done. Their constituents can do likewise. But in neither case does such a step *ipso facto* operate a dissolution or destruction of the Farmers' Council. This can only be done by the delegates failing to discharge the trust with which they have been honored, coupled with the concurrent or continued failure to elect or choose their successors.

I invite your attention to the address of the Executive Committee, which appeared in THE RURAL MESSENGER of October 8th.

I have heretofore appointed and caused to be published the committees who were charged with special business which required early attention.

Appended hereto will be found a further list of committees, who will be expected to report when the Council meets in November.

EDWARD DROMGOOLE.

STANDING COMMITTEE.

1. *Finance*.—Captain W. E. Hinton, Jr., Petersburg; General Wm. Mahone, Petersburg; B. C. Friend, Esq., Prince George.

2. *Immigration*.—John Dodson, Esq., Dinwiddie; Maj. S. H. Boykin, Nansemond; Jno. Washington, Esq., Caroline.

3. *Fertilizers*.—Judge W. H. Mann, Nottoway; Colonel F. G. Ruffin, Chesterfield; J. J. Mitchell, Dinwiddie.

4. *Labor, Transportation, &c.*—General Wm. Mahone, Petersburg; Major Mann Page, Prince George; Col. J. B. Zollicoffer, North Carolina.

5. *Tobacco*.—Major R. V. Gaines, Charlotte; Dr. J. M. Hurt, Nottoway; R. O. Gregory, Esq., North Carolina.

6. *Cereals, Grapes, &c.*—General W. H. F. Lee, New Kent; W. D. Hamlin, Esq., North Carolina; T. L. Payne, Esq., Chesterfield.

7. *Horticulture and Pomology*.—Capt. George B. Clarke, Brunswick; W. D. Kitchen, Esq., Isle of Wight; Dr. George B. Stephens, Albemarle.

8. *Cotton*.—W. B. Westbrook, Esq., Petersburg; Colonel George Harrison, Brunswick; Captain W. H. Briggs, Greenville.

SPECIAL COMMITTEES.

1. *To carry into effect report of Committee on 'Fertilizers about establishing Manufactories of Fertilizers*.—Judge W. H. Mann, Nottoway; John Dodson, Esq., Dinwiddie; J. M. Hurt, Nottoway; H. G. Williams, North Carolina; W. D. Hamlin, North Carolina.

2. *To carry into effect the recommendation of Tobacco Committee.*—Major R. L. Ragland, Halifax; Major R. V. Gaines, Charlotte; Dr. Jos. A. Flippin, Caroline; R. O. Gregory, North Carolina; Captain W. E. Hinton, Jr., Petersburg.

3. *Committee to Write Summary of Doings of Council.*—W. B. Westbrook, Esq., Major R. V. Gaines, and Major R. L. Ragland.

In regard to these committees my memorandum states that they were forwarded but not published. I therefore send their names again for publication.

GRANGE WORK IN CALIFORNIA.

The *Rural World*, of St. Louis, contains in a letter from T. W. A. Wright, of Borden, Berne county, California, some account of what Granges have done and expect to do in that State. Gentlemen who say that nothing can be done will please read, for the most part, with spectacles:

We now have over 230. Our State Agency was established August 8th, 1873, with the noble shipping firm of E. E. Morgan's Sons (a branch of the New York house), whose independence and fidelity to principle has done so much to revolutionize the vast grain trade of this coast; who have almost shattered the powerful "grain ring," and through whose instrumentality our various granges have loaded and are now loading some fifteen ships on their own account for Europe. Should our work continue as prosperous as it has been for two months past, it will not be many months before the sails of fifty or sixty ships, composing "the grange fleet of California," will whiten the ocean between San Francisco and Liverpool. Oregon, too, is following suit, and our brothers there are shipping grain direct to Europe. Ever will the farmers of this coast be grateful for the gift of the grange. It has been a "God send" to us.

As you will see from our papers, we now have our grangers' bank of California (capital \$5,000,000), and local farmers' banks in various counties (the genuine article); a wool agency; a dairy agency; a fruit-growers' association, with their numerous drying establishments, which will at last make fruit-growing profitable here by preventing an immense waste; a very successful purchasing agency, which we hope to improve soon by more direct trade with your Western manufacturers. We have a farmers' mutual fire insurance company, and hope soon to have a "mutual life" on as economical and safe a plan, and the grangers' narrow gauge railroad from Salinas to Monterey (18½ miles), will soon be completed. We have large, substantial and well filled grange warehouses along our railroads and rivers; handsome two-story grange halls, with large store rooms below, in some instances, in which trusty merchants friendly to our cause, are invited to open stores, also some independent grange stores where local merchants have not shown much inclina-

tion to accommodate. We now have low rates of storage, lower rates of interest, lower priced sacks, lower commissions, and more moderate and just profits in trade. Last but not least, our mechanics' associations are cordially uniting with the grange in matters of mutual interest; for instance, the proper development of the colleges of agriculture and mechanic arts in our State University. As far as this latter point is concerned, however, the line of interests of farmers and the line of interests of mechanics, lie entirely parallel in every State and Territory, when properly understood.

The price of wheat with us now is distressingly low, but this is the fault of the Liverpool market, and we have the consolation of knowing that though wheat is between sixty and seventy cents per 100 pounds lower in Liverpool now than it was this time two years ago, our farmers are getting only ten or fifteen cents less a hundred in San Francisco than they did at this time in 1872. We are sure this is caused by the organization of our farmers in the grange. We hope for better prices as winter advances.

(For the Southern Planter and Farmer.)

TUCKAHOE FARMERS' CLUB,

OF HENRICO COUNTY.

The Club met on the 7th of October at the residence of Mr. Channing M. Robinson.

The premises being first viewed, the Club was satisfied with his mode of cultivation. He had made a very fine crop of winter oats and also clover. His corn crop was also good, though somewhat injured by the "chinch bug." Some of his corn, planted as late as the 6th of July, of the variety known, I believe, as "Rare ripe," was large and promising.

The afternoon was occupied in the discussion of the subject of

SOILING AS COMPARED TO GRAZING.

Dr. Beattie advocated the soiling of our stock: 1st. On account of our present want of fences; and, 2dly. As a great saving of manure. These points he elaborated to some extent, and contended that one acre of ground on the soiling system would support five to seven head of stock, while pasturing will only support one to the acre. By the ranging of stock, too, by irregularity and dissipation by atmosphere, the important article of manure is scattered and lost. Also contended that, by confining our stock we could make available as a manure the weeds and bushes of our hedges and ditch banks, and in this expense of cutting and carrying to them, one man could attend to twenty head of cattle.

Mr. Adams, in his book on this subject, contends that it takes fifty acres of pasturage for fifteen cows. In soiling, he could keep twenty on four acres, and raise crops on the surplus, by this means manuring the residue well; and that from twenty head of cattle

one hundred and fifty loads of manure can be annually made. In addition, Dr. Beattie thinks we can raise much larger and better stock by feeding than grazing, and mentioned an instance of a neighbour keeping twenty cows well on four acres of land, and his land made rich, and recommended soiling as follows: First with our lawn grass, weeds, &c.; next with our rye crop, then clover, winter oats and corn sown broad cast. Sorghum also was suggested as answering a fine purpose in this respect.

Dr. Crenshaw differed from the views expressed in favor of soiling, and gave his experience in the management, feeding, &c., of a large number of cows.

The Doctor contended that grazing was by far the better plan, and the only means of avoiding disease, which would certainly result if this plan of confining large numbers of cows or other stock together in lots or pens was adopted; that cows particularly must be allowed the freedom of pasturage to keep them in health. His practice is to seed twenty-three acres, as a standing farm, for rye, and upon it graze his stock. It was also urged that our clover and grass lands generally derived great benefit from the tramping of the land by our stock.

I give you but the leading points in this discussion, *pro* and *con*, knowing that you admire brevity.

Yours,

J. A. LYNHAM, Reporter.

[For the Southern Planter and Farmer.]

NEW THINGS AND OLD THINGS.

There are far too many farmers who are willing to be humbugged. We are all making too much haste to be rich; are all on the lookout for short and easy methods of success; are all anxious about large returns on small investments; therefore we are easily persuaded by promises of large premiums to take a ticket in any new lottery that turns up.

It is the best thing about agriculture that there is no lottery in it; it does not open any royal road to wealth, or any fast way to be rich. Its ways to success are the honest way of straight forward, hard work, the safe way of "little by little," the same way of constancy, diligence and perseverance.

Shed upon these paths the light of educated intelligence and the revelation of science, and having done all that man may do, the sure blessings of a bountiful harvest awaits us.

The "rain may descend, and the floods come," but as sure as the promise of seed time and harvest, is the assurance of ultimate success to the man who stands truly and faithfully to his work. Let us not become excited then over new things; either new seed, or new plants or new lands. Wheat is an old thing, but wheat will do, though it has its enemies, if we work it right. Grass is an old thing and

has its enemies, of which we, the cultivators of the soil, are the greatest, for we kill it constantly with an over amount of stock; yet grass is a very good thing. Corn is an old thing, and is treated by us worse than anything we plant, but what farmer in ten thousand is so rash as not to plant corn? This is universal testimony to its value.

So apples are old, peaches, pears, grapes, and all sorts of fruit; but are they not good? Finally, our lands are "old" as we say in these *old States*, and so they are in the sense that the "everlasting hills" are old, but "worn-out" they are not. They are good lands; abused they may have been, but they are good; and it is only another phase of the folly which is craving after new things, which is tempting our young men constantly to seek new lands. Wise men will be satisfied with the old things and strive to do better with their wheat, corn, tobacco, cotton and other crops, and will especially stick to and improve their old lands; but those who will make haste and be rich will be forever after new seed, new plants, and *new lands*, and their brother farmers will profit by the experience they so dearly bought.

I frequently hear the expression "worn-out lands." Let it be understood that there is no such thing as "worn-out lands;" that such an expression conveys a falsehood. That even with our present light, it is a very practical thing, with a moderate degree of intelligence and skill, and no very large amount of means, to restore these lands to any degree of fertility they have ever possessed. This lesson has been well learned in Maryland and a portion of Virginia, but our Southern friends of the Atlantic States appear to be slow to make much progress in that direction.

Let our farmers be told everywhere and constantly that they have no "worn-out lands," that in fact their lands were intended to last forever, and will last forever, and feed and clothe them and their children for a thousand generations.

T. W. C.

Louisa County, Va., Oct. 7th, 1874.

ALKALI FOR AN OLD APPLE TREE.

In considering the growth of organisms, the action of the alkalies is to be looked upon as scarcely less important than that of air and water. Lime is the great animal alkali, and potash the vegetable one; its old name of vegetable kali expressed that fact, all the potash of commerce is well known to be derived from wood ashes. The importance of potash as a manure has been frequently overlooked by farmers, who rarely know the large amount of this material found in grass, grain crops, leaves, barn-yard manure, roots and fruits. How potash acts in plants, in conjunction with carbon and silex, to form woody fibre, starch, sugar and oil, is yet unknown to chemical observers, but the fact of its action is beyond a doubt.

Liebig long since pointed out that the chief cause of barrenness is the waste of potash carried off by rich crops, especially tobacco,

with no replacement by proper manure. How many millions of pounds of potash have been sent to Europe from the forests of America, and in the grain, tobacco and hemp! Luckily one alkali may be replaced by another, and we have received a considerable quantity of soda from European seaweed, and in the shape of salt. Latterly, nitrate of soda from natural deposits in South America is brought to us at a cheap price.

The point to which we now call attention is that our farmers and fruit growers have ignored, or rather have been ignorant of the importance of wood ashes as a vegetable stimulant and as the leading constituent of plants. Even coal ashes, now thrown away as useless, have been shown, both by experiment and analysis, to possess a fair share of alkaline value. According to our observation, if the practice of putting a mixture of wood and coal ashes around the stems of fruit trees and vines, particularly in the spring, were followed as a general rule, our crops of apples, grapes, peaches, &c., would be greatly benefited in both quality and quantity, and the trees and vines would last longer. We will relate only one experiment.

Some twenty-five years ago, we treated an old hollow pippen apple tree as follows: The hollow, to the height of eight feet, was filled and rammed with a compost of wood ashes, garden mold, and a little waste lime, (carbonate). The filling was securely fastened in by boards. The next year the crop of sound fruit was sixteen bushels from an old shell of a tree that had borne nothing of any account for some time. But the strangest part was what followed. For seventeen years after filling, the old pippen tree continued to flourish and bear well.—*Scientific American*.

COST OF PORK.

Your correspondent, J. B. S., asks how much pork costs per pound. This of course depends in a great measure on the kind of pig and manner of feeding. After some practical experience, I am satisfied that, other things being equal, a cross between a good Chester White sow and Berkshire boar will make more pork from the same amount of food than any other breed; they may not be as large at the same age as a full grown Chester, but they will consume less food and keep in better condition.

An old and very successful pork producer once told me that his rule was that when the price of both corn and pork commenced with the same figure, it was safe to feed to good hogs. Or in other words, when a bushel of corn was worth sixty cents, the pork must bring six dollars per hundred. By inference I conclude that the result of his experience was that ten bushels of corn would make one hundred pounds of pork. By referring to my note book, and a record of experiments, I find that in one case twenty pigs gained 837 pounds by eating 83 bushels of corn. In this case the corn was shelled and fed whole in the trough. In another case I find that the same number of pigs ate 47 bushels of meal (with water to drink) in 14 days, and

gained 553 lbs. In the third experiment, 20 pigs ate 55½ bushels of meal, made into thick slop with *cold* water, in 14 days, and gained 731 lbs. In the first case the gain was a trifle more than 10 lbs. per bushels, in the second one 11¾ lbs., and in the third 13 1-6 lbs. At the price of pork at the time, the corn in the first experiment brought 50 2-5 cents, in the second 58¾ cents, and in the third 65 5-6 cents.

In a fourth experiment the hogs (20 in number) were fed 46½ bushels of meal (*boiled* into thick mush) in 14 days, and gained 696 lbs.; gain 15 lbs. per bushel, and corn brought 74 4-5 cents per bushel.

In my own experiments I have found that five bushels of *old* shelled corn fed to good pigs of the cross before mentioned (fed in November), made me 47¾ lbs. of pork—or gain in weight. For pigs well selected and cared for and economically fed without cooking, it is probable that twelve pounds per bushel is as much as can be safely counted on, and probably the *average* of those actually fed will not be more than eight or nine. J. B. S. knows the price of both pork and corn, and can cipher out my answer.—*Cultivator and Co. Gent.*

LABOR SAVING IN THE CULTURE OF TOBACCO, &c.

As cause must ever precede effect, so every continued and permanent success in business pursuits, farming included, must be preceded by a sound theory. Every successful man has in his mind maturely considered and well arranged plans, though he may never have reduced them to writing. It is true that in reference to many things, there are more visionary theorists than practical successful men, because generally it is easier to plan than to execute. The wise man discarding the pride of opinion, is willing to learn things he does not know, even from his inferiors; and if he be not selfish will communicate his knowledge to others. In some respects we all know better than we do, not for want of will, purpose, and desire, but because of casualties, and adverse circumstances that interpose, and prevent the full consummation of our best arranged plans. This however should not diminish, but increase our desire for more knowledge, that we may be the better prepared to overcome all difficulties in our way.

With this, as I think, not inappropriate preface, I now present my theory and practice for labor saving in the culture of Tobacco, together with some remarks concerning the advantages of saving and applying the manure to the land. To demonstrate the advantages of the plan which I, together with some others, have adopted, it must be contrasted with the antecedent customs, when all tobacco land was hilled before being planted. This method, I suppose, had its origin with the first growers of tobacco in this country, when the land was being cleared, and the stumps, roots, &c., prevented thorough preparation by the plow. For such land, and only for such, it is still, doubtless, the most effective method of preparation. There

are some advantages in having tobacco plants slightly elevated to prevent their being covered and killed, when small, by hasty and excessive rains. But these can be secured more cheaply and more easily, by bedding with the plow, than by hilling with the hoe. It is of the first importance to plow, harrow, and thoroughly refine the land, otherwise the clods will be turned by the plow, when bedding into the bed, and cannot be removed, even by the hilling process, without extra work which the present laborers will not faithfully perform, and by the neglect of which, I have seen the growth of tobacco, on rich land, retarded, and light and inferior crops made, which yielded no profit.

Our springs of late years being backward, and our summers dry and shorter, the planter should do, if possible, every thing necessary to accelerate the growth, and hasten the early maturity of his crop, by which an advantage is secured in both quantity and quality. I have been a grower of tobacco for 30 years. Before the war, not being owner, I was of necessity the hirer of all the labor I employed. This necessity induced a vigilant eye to expenditures, and the abating of all unnecessary labor. The heaviest item remitted in the cultivation of tobacco was hilling the land. Dispensing with this I found to be equivalent to the saving of 8 days labor for five hands, at hilling time, and 6 days labor for 5 hands to cut off the hills, at planting time, for a crop of 100,000 plants. The average yield of my land during the period of the hilling process, was 5 to 6 plants to the lb. Under my present system $3\frac{1}{2}$ plants to the lb. I do not attribute this gain alone to the planting in beds instead of hills, but in part to this, and more to better manured, fertilized, and prepared soil.

Before plowing my land for tobacco the first time, I apply broadcast all the manure I can raise. In order to do this in time, I sometimes begin in the fall, and continue to haul out, and plow in, so that the manure may have time to decompose, and become incorporated with the soil. Much of the best properties of the manure is lost by fermentation, and by leaching, which would be saved and utilized in the manner above stated. I endeavor in this way to manure and plow all my land for tobacco by the 1st of April.

During the month of April I harrow and well refine the surface; then re-plow, harrow, and thoroughly refine—breaking and pulverizing the clods. From the 1st to the 20th of May I bed the land. This is done by running off the rows with a single shovel plow, the distance desired, say three feet a part. The guano is then applied in the furrow. Then follows the double plow, running twice to each row, and bedding upon the guano. When ready to plant, these beds are struck off two at a time, by a scraper attached to shafts, and drawn by a mule or horse walking between the beds. The planting is done without further preparation by the hoe or otherwise, by setting the plants in the centre of the bed, in a straight line with each other the distance desired, say 30 to 36 inches. The land is thus left in a fine condition to facilitate the cultivation of the crop. Instead of being in hills, as under the old system, requiring nearly the whole surface to be cut by the hoe, there is but little hoe work needed. As

soon as the grass comes through the surface, the *three-tooth Cultivator* should be put to work, running twice to each row and with care, by which the grass will be effectually killed, and only a narrow strip in the centre of the bed to be cut by the hoe. This is now a critical period in the growth of tobacco, and it is very important that this work with the cultivator be done as soon as the grass appears, making true the saying, "a stitch in time saves nine."

The cultivator should be followed by the hoes, to cut the strip of soil left in the centre of the bed, and *break the crust around each plant, and put a little fine soil around each*. This done the tobacco will need no more work until it attains the size of a summer hat, or has pretty well covered the top of the bed, when it should be plowed with the *single shovel plow*, by running a furrow on each side as close to the plant as possible, to avoid loosening it. The hoes should follow, putting to each plant a moderate sized hill. The season being favorable the growth will be rapid, and about the time the plants generally are large enough to top, it should be again plowed, and this time with a single-horse mould-board plow, running twice to each row and turning the soil to the tobacco. This should be followed in three weeks, or when grass appears, by a light scraping with the hoes, when the cultivation of the season is done. I think I have shown that the cost of cultivation under this system is greatly reduced, and also is made more effectual. A few general remarks and I am done.

First it does not pay under our present market to grow small tobacco, except for *bright wrappers*. Large tobacco cannot be grown on poor land, if 500 lbs. of guano *alone* were applied to each acre. Use guano in connection with stable, farm-pen, and all kinds of manure that can be raised on the farm. Make the land rich—plant early, and work well, and you will be recompensed for the labor expended. Those who reason from the low price of tobacco when slavery existed, to prove that it must and will sell as low under present circumstances, reason, I think, from wrong premises, and consequently to erroneous conclusions. These profits were estimated more with reference to the increasing value of negroes, than from the surplus productions of crops.

Now all labor has to be paid for, or done by the land owner, consequently as soon as the net proceeds of any article of produce falls below a price that will pay a profit on the cost of its production, necessity controls, and as a consequence the price advances. I therefore conclude that the price of tobacco must rule higher in the future.

J. M. BAKER.

Lowisa county, October 15th, 1874.

To clean paint without injury and with very little labor, take a damp cloth and dip it in common whiting and rub over the paint; when it begins to dry wash it off with clean cold water.

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RULES FOR THE CARE OF SHEEP.

A circular issued by F. C. D. McKay, the General Agent of the American Emigrant Company, gives the following:

The company have already ten thousand sheep scattered among the farmers, who purchased land of them in flocks ranging in size from fifty to two hundred head.

1. Keep sheep dry under foot with litter. This is even more necessary than roofing them. Never let them stand or lie in mud or snow.

2. Take up lamb rams early in the summer, and keep them up until December 1st following, when they may be turned out.

3. Drop or take out the lowest bars, thus saving broken limbs.

4. Count every day.

5. Begin graining with the greatest care, and use the smallest quantity at first.

6. If a ewe loses her lamb, milk her daily for a few days, and mix a little alum with her salt.

7. Let no hogs eat with the sheep by any means, in the spring.

8. Give the lambs a little mill feed in the time of weaning.

9. Never frighten sheep, if possible to avoid it.

10. Sow rye for weak ones in cold weather if you can.

11. Separate all weak, or thin, or sick, from those strong, in the fall, and give them special care.

12. If any sheep is hurt, catch it at once and wash the wounds, and if it is fly time, apply spirits of turpentine daily, and always wash with something healing. If a limb is broken, bind it up with splinters tightly, loosening as the limb swells.

13. Keep a number of good bells on the sheep.

14. Do not let the sheep spoil wool with chaff or burs.

15. Cut tag-locks in early spring.

16. For scours, give pulverized alum in wheat bran; prevent by taking great care in changing dry for green feed.

17. If one is lame, examine the foot, clean out between the hoofs, pare the hoofs if unsound, and apply tobacco with blue vitriol, boiled in a little water.

18. Shear at once any sheep commencing to shed its wool, unless the weather is too severe, and save carefully the pelt of any sheep that dies.

19. Have at least one good work by you for reference. This will be money in your pocket.—*Indiana Farmer.*

TWO QUEENS IN ONE HIVE.

We recently copied from the *Agricultural Gazette*, published at London, England, an account of two Queens occupying amicably one hive. Another correspondent sends that paper the following additional particulars of this singular fact three weeks later than the date at which the former article was written :

“In your impression of the *Agricultural Gazette* of August 22, you ask for further information respecting Mr. Boulton’s hive of bees in which two queens have been residing. As the case in point is, I believe, unprecedented in the annals of bee-keeping, I will endeavor to give you as concise a history of it as possible, in order that it may remain as a public record and reference hereafter. About the commencement of July, Mr. Boulton called my attention to it, and requested me to send it to the prominent journals treating on bee-culture. Mr. Boulton is a tradesman of Ulverston, and has for many years been a bee-keeper. The event was one so strange to him that he courted the fullest publicity, and the phenomenon has been seen by many bee-keepers, who are unable to reconcile it with past experience of the habits of bees. I must premise that my own knowledge of bees is limited, and that my information is drawn from others. The hive in question is one of pure Ligurians, and is a last year’s swarm. Mr. Boulton had several other swarms, and all were doing well in the spring of this year, this especial one being particularly strong, and was enclosed in one of Woodbury’s bar box hives. Later on, however, it was noticed by the owner that whilst the other swarms continued to do well, this one seemed to be retrograding, and the belief was that the queen was dead. About the middle of June an examination was made, and a queen’s cell found, in which a young queen had been hatched, which was seen going about amongst the bees. At this time there was no worker brood in the hive, nothing being visible but a little drone brood. On June 28, in the presence of several friends (all bee-keepers), the hive was again examined, to see how the young queen was breeding. The first bar taken out was found to be full of brood on each side, and a young queen was upon it. Being anxious to see how much brood the hive contained, the next bar was taken out, but it had no brood on. On removing the next bar, it was found to have a sheet of brood on each side, and, to the astonishment of all present, another young

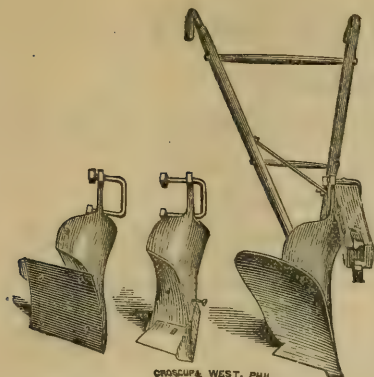
queen was upon it. They continued to remain on their separate bars for about a week, and on July 3 I was present when the hive was again examined, and the two queens were on the same bar, but on opposite sides. In the lapse of another week I again accompanied Mr. Boulton to his garden, when the queens were on the same side of the bar, and distant only about an inch from each other in the midst of the bees, all working amicably together. Subsequent examinations have shown them in different positions on the same bar, sometimes on separate ones. The fact of the empty bar being between them when first discovered, showed that both queens had been impregnated, and were fertile. The broods were also in the same state and of the same age, proving that both queens were young and had commenced laying at the same time. One queen was a very fine large one, and of a beautiful yellow color; the other was less, and the color not so good. Since the beginning of August the lesser queen has not been seen, and as the hive was very full, I have refrained writing to you on the subject, thinking it possible that further search might discover her. On Monday last, however, a searching examination was made, but without discovering her. The hive is very full of bees, and they are fast making honey. Mr. Boulton was advised to separate the hive, but this he refused to do, being determined and anxious to see the result of so strange an occurrence. The supposition is that when the old queen died, the bees hatched two queens, and before these began laying the hive would necessarily be weakened, thus the bees resolved to retain both to get up the strength of the hive. This has now been accomplished, and the smaller queen has been destroyed. The present occupants of the hive are very pure bred."—*Michigan Farmer*.

Young pigs ought to get the richest and best of food. There is nothing so good as skimmed milk with cooked corn meal.

FRENCH WASHING FLUID.—Dissolve one pound of sal soda in one quart of hot water, and add four quarts of lime water; let it settle, and pour off the clear water carefully; then dissolve three ounces of borax in one quart of hot water, and when dissolved add to it the five quarts of clear water in which the soda and lime were dissolved. When the mixture is cold, dissolve in it two ounces of carbonate of ammonia. Bottle, and keep tightly corked in a place where it will not freeze. Use half a pint or less to five or six gallons of water. Put the clothes into soap suds, and let them soak over night, adding some of the fluid to the suds; or it can be added to the suds before boiling the clothes. It makes a strong, thick suds, saves more than half of the soap, and nearly all the rubbing. After boiling, the clothes should be rinsed well in clear water.

THE WATT PLOW

CONTINUES TRIUMPHANT!



CROSSCUT. WEST. PHIL.

No CHOKING when bright and smooth; no LABOR to the plowman; ONE-THIRD LESS DRAUGHT to the team; thorough BURIAL of Weeds, Grass, &c.; great STRENGTH, Durability and Economy in its use, and complete pulverization of the soil.

I have, within the past eighteen months, made great improvements in the WATT PLOW, and can, with greater confidence than ever, commend it to the farming community everywhere.

GEORGE WATT.

Premiums received during the last three weeks of October 1873:

Virginia and North Carolina Fair, at Norfolk, October 7, 1873—ALL FIRST

PREMIUMS AWARDED ON PLOWS.

The test of plows took place in a sandy loam, with weeds, &c., from four to six feet high. The Watt Plow did not choke at all, and buried the vegetation perfectly.

North Carolina State Fair, at Raleigh, October 14, 1873—ALL PREMIUMS AWARDED ON PLOWS.

Piedmont Agricultural Fair, Culpeper Courthouse, Va., October 14, 1873—ALL PREMIUMS AWARDED ON PLOWS.

The test took place in a hard, stiff clay soil not plowed since the war, and covered with running briars. The Watt Plow was run seven inches deep without difficulty, and never choked, burying everything under.

Virginia State Fair, Richmond, October 28, 1873—ALL THE PREMIUMS ON EACH SIZE, RIGHT AND LEFT HAND.

Also, two special premiums from the Society. Also, two special premiums from the city of Richmond.

The Plows were tested in a sodded and heavy pipe soil. The working of the Watt Plow was admired by all.

Western (N. C.) Fair at Salisbury, October 7, 1873—HIGHEST PREMIUM.

Darlington (S. C.) Fair, October 11, 1873—HIGHEST PREMIUM.

The WATT PLOW of all sizes, from one to four horses, warranted to do better work, with more ease, than any plow in use. If they do not prove so after one week's trial, they may be returned to us, and the purchase money will be refunded.

HARROWS, CULTIVATORS and ALL KINDS OF FARMING IMPLEMENTS for sale on the best terms.

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WATT & CALL,

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FOR SALE

Several very fine Short Horn Cows and Heifers, one Yearling Bull and four Bull Calves. Fifty Cotswold Ewes and Lambs, all either imported or bred direct from imported stock, Lambs by Imported King Briton.

Thirty Berkshire Pigs out of imported sows, "Hillhurst Rose," "Rosedale," and "Wharfdale Rose 2d," and sired by imported "Wharfdale Chief," and "Canada Prince."

 Satisfaction guaranteed. Prices Moderate.

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Bellevue Stock Farm.

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POWHATAN RAW BONE SUPER-PHOSPHATE,

MANUFACTURED BY

JAMES G. DOWNWARD & CO.

To the Planters of Virginia and North Carolina:

We again respectfully call the attention of those intending to use fertilizers on their spring crops to the Powhatan Raw Bone Super-Phosphate, and particularly those who want a reliable fertilizer for tobacco and cotton, as we intend in the future, as in the past five years, to furnish an article which has no rival, regardless of price. Wherever it has been used by the side of any other fertilizer whatever, not excepting the deservedly popular and higher priced tobacco fertilizers of the day, it has in every case proved itself superior.

A few out of many of our certificates from our patrons:

BLACKS AND WHITES, Nottoway Co., Va., Jan. 1, 1872.

Dear Sirs.—This is to certify that I have used the Powhatan Phosphate along side of three other kinds of fertilizers, each of which cost more than the Powhatan, and the difference in my crop of tobacco was greatly in favor of the Powhatan Phosphate. From my experience last year I think it a No. 1 manure, and recommend its general use.

Very truly yours,

SAMUEL F. EPES.

LUNENBURG, Co., Va., Jan. 29, 1873.

Gentlemen.—I used your "Powhatan Raw Bone Super-Phosphate" last year on tobacco with perfect success and entire satisfaction.

Very respectfully,

R. H. ALLEN.

DINWIDDIE Co., Va., January 13, 1872.

Dear Sirs.—In reply to your request, I have no hesitation in saying that I prefer the Powhatan Raw Bone Super-Phosphate, bought of you last spring, to any preparation that I have ever used on tobacco. I wish you to furnish me again this spring.

Yours truly,

WM. B. COLEMAN.

POWHATAN Co., Va., Jan. 30, 1873.

Gentlemen.—Yours of 24th, asking my opinion of the Powhatan Phosphate, to hand. In reply, I have to say it acted well on my tobacco—better than a more costly fertilizer that was applied by the side of it.

Yours truly,

Z. G. MOORMAN.

AMELIA Co., Va., Jan. 16, 1872.

Dear Sirs.—In regard to the Powhatan Phosphate bought of you last spring, I take pleasure in saying that I am much pleased with its action on my crop. I used it on very thin land, 200 pounds to the acre, and my tobacco weighed better than any crop I have ever raised. I wish you to furnish me again this spring.

GEO. H. WILLS.

HARMONY, Halifax Co., Va., Jan. 20, 1872.

Gentlemen.—You request me to give you the result of my experience in the use of Powhatan Raw Bone Super-Phosphate. I have used it successfully for two years, 1870 and 1871, and I think it the cheapest fertilizer I have ever used, and expect to use it again the coming season.

Yours truly,

EDWARD MOORE.

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CHEAP TO EFFECT SALES.

LEVY BROTHERS

have, therefore, marked the whole of their stock at the lowest possible prices. They only enumerate a small portion of their stock, but will state that they have everything in the way of Foreign and Domestic Dry Goods, Trimmings, Notions Carpets, Matting, &c.

Striped and Plain Mixed Wash-Poplin, twenty-seven inches wide, 16 $\frac{3}{4}$ c. per yard worth 25c.; Striped Wash-Poplin, twenty-four inches wide, at 14c. worth 20c.; Mixed Wash-Poplin at 32 $\frac{1}{4}$ per yard worth 16 $\frac{3}{4}$ c.;

East-colored Lawns at 12 $\frac{1}{2}$ c. per yard worth 18c.; Seersucker, twenty-seven inches wide at 12 $\frac{1}{2}$ c. per yard worth 20c.; Black Grenadines with colored stripes at 12 $\frac{1}{2}$ c. per yard worth 25c.;

Black Grenadines with colored silk stripes at 16 $\frac{3}{4}$ c. would be cheap at 30c.; Japanese Poplin at 16 $\frac{3}{4}$ c. per yard worth 25c.; Japanese Poplin at 20 and 25c. would be cheap at 30 and 35c.;

Japanese Poplin, silk warp, at 40 and 50c. per yard worth 60 and 75c.; Striped Silks at 75c., 85c., \$1 and \$1.25 per yard—all 25c. a yard below regular prices; Black Silks from 60c. to \$3.50 per yard—all much below regular prices; Colored Silks in great variety at lower prices than at any time since 1862;

Striped Muslin at 25c. per yard, would be cheap at 35c.; Checked Muslin, large patterns, at 30c. per yard worth 50c.; Victoria Lawn from 20 to 50c. per yard—all very cheap; Linen Lawns at 25c. worth 35c. per yard;

Grass-Cloth Suitings with side bands for trimmings all yard-wide at 20c. worth 25c.; A large variety of Linen Suitings at very low prices; Bombazines and other dress material for mourning;

Alpacas, Mohairs, and Brilliantines, in all qualities, at lower prices than ever; Excellent Calicoes at 8 $\frac{1}{2}$, 10, and 12 $\frac{1}{2}$ c. per yard; Swiss Muslin from 12 $\frac{1}{2}$ to 50c.—great bargains in this line;

Nottingham Lace, for curtains, at 20, 25, 30 and 35c. and up to \$1.25 per yard; Tucked Cambrics in all widths and qualities; Shirred Muslin at 50c. per yard, worth \$1; Full-Width Linen Sheeting at 75c. per yard worth \$1;

Pillow-Case Linen, 1 $\frac{1}{4}$ yards wide at 60c. worth 75c.; Table Cloths, warranted all linen, two yards long, at \$1 worth \$1.50; White Matting, one yard wide, at 25, 30, 35, 40, 45 and 50c. per yard—all excellent quality for the price;

Red Check Matting at 30c. and up to 60c. per yard; 6-4 White Matting at 40c. per yard, worth 50c.; 6-4 Red Check Matting at 45c. per yard worth 60c.;

Victoria Lawn Dress Patterns in white and buff skirts, ready-made with sufficient material for a sacque or basque at \$2—cost double the money to import; Black Lace Scarfs, now so fashionable, from \$1 up to \$6;

Black Lace Points and Sacques in all qualities at remarkably low prices; Printed Cambric Frilled Collars and Cuffs at 15c. a set, worth 50c.; Ruffling and Ruffs in great bargains—some extraordinary bargains in this line;

A large stock of Striped Cotton Hose for women and Children; Crepe Veils in all sizes—some extra large and heavy;

Great bargains in Cotton Trimmings, Laces, Embroideries, Jewelry, Fans, Parasols, Fan Chains, Satchels, Trunks, Baskets, Shawl-Straps, &c., &c.

Particular attention paid to orders. Goods sent by express C. O. D., or upon receipt of post-office order or registered letter.

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JOHN BULLOCK & SON,

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For more than thirty years we have been engaged in the manufacture of "Pure Ground Bone", our crude stock being gathered daily from the butchers here, with whom we have yearly contracts. We have completed our new factory, and with the addition of the latest and most approved machinery, will be able to fill all orders sent to us at short notice and guarantee at all times to the purchaser a first-class article at the lowest market price.

Respectfully

JOHN BULLOCK & SON.

The attention of those desiring to purchase
Evergreens, Ornamental Trees and Shrubs
 Is called to the

MAGNOLIA NURSERY

AT


RICHMOND, VIRGINIA.

The stock generally is well grown and the assortment complete, comprising everything that is desirable for shade or ornamental purposes; also all the leading varieties of

Grapes, Currants, Strawberries and other Small Fruits.

Our prices are low, considering the quality of the stock, which we feel confident will give general satisfaction.

The Nursery, which is situated on the Brook Turnpike near the city, is open to the inspection of visitors during business hours.

 Descriptive Catalogue furnished on application.

Address all letters to

L. J. HARVEY,

Nurseryman, Richmond, Va.

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FRUIT TREES & VINES

For Sale Cheap.

50,000 Apple Trees,	.	.	.	\$12.50 per	100.
“ “ “	.	.	.	100.00 “	1000.
A large lot of Cherries,	.	.	.	25.00 “	100
Concord Grape Vines,	.	.	.	10	cents.
Norton Seedling,	.	.	.	25	“
Maxatawny,	.	.	.	10	“
Delaware,	.	.	.	10	“
Catawba,	.	.	.	10	“
Scuppernong,	.	.	.	20	“
Isabella,	.	.	.	10	“
Lenoir,	.	.	.	10	“

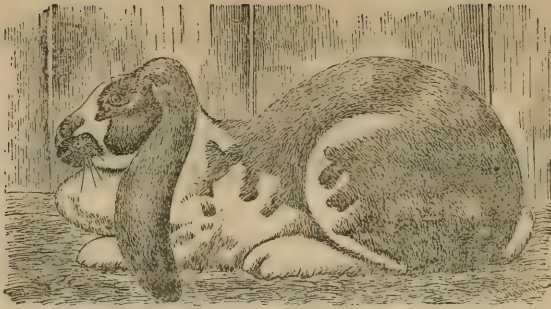
ALL FIRST-CLASS STOCK.

For further particulars, address

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BREEDER AND DEALER IN

Pure Bred Fancy Poultry and Pigeons, Song and Ornamental Birds, Lop-Eared Angora, Himalayan Rabbits, Guinea Pigs, Ferrets, White Mice, Gold Fish, Aquaria, Aquatic Plants, Premium Chester White and Berkshire Pigs, Jersey and Ayrshire Cattle.

Particular attention given to Orders from a distance. Satisfaction guaranteed. Stock not on hand furnished at Short Notice.

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SOLUBLE PACIFIC GUANO,

No. 1 Peruvian Guano,

FLOUR OF RAW BONE,

Ground Plaster, Lime, Agricultural Salt, &c.

FIELD, GRASS, AND GARDEN SEEDS,

SEED POTATOES

Of the EARLY ROSE, EARLY GOODRICH, PEERLESS, and other choice varieties

For further information and supplies, address

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Seed and Guano Merchants, Richmond, Virginia.

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(ESTABLISHED 1854.)

A. HANCE & SON, Nurserymen and Florists, RED BANK, N. J.

The following Catalogues are published for gratuitous distribution, viz :

No. 1—Descriptive Catalogue of trees, shrubs, vines, &c.

No. 2—Descriptive Catalogue of plants.

No. 3—Wholesale Trade-list, (for nurserymen and dealers.)

Peach Trees and Ornamental Stock, *specialties*.

A fine stock of *Early Beatrice Peach*, *Concord* and *Martha Grape Vines*, and other *Peach Trees* and *Grape Vines* for Southern Planters.

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ROBT. J. FARRER & CO., Commission Agents, PRODUCE & CATTLE SALESMEN.

AGENTS FOR THE SALE AND PURCHASE OF

WELL-BRED CATTLE,
SHEEP, PIGS, POULTRY, &C.

AGENTS FOR

English Superphosphate, \$40 Per Ton
COMPLETE GUANO, \$67.50.

 Commissions across the water executed.

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Munson Hill Nurseries.



LARGE STOCK OF FIRST-CLASS

FRUIT AND ORNAMENTAL TREES FOR SALE.

SMALL FRUIT, HEDGE PLANT, ASPARAGUS, &c.,

Peach trees,	3½ to 6 feet	\$10 per 100 ; per 1000	\$ 80 00
“ “	2 to 3 “	5 per 100 ; per 1000	40 00
Apple “	4 to 7 “	15 per 100 ; per 1000	100 00
“ “	3 to 4 “	5 per 100 ; per 1000	40 00
Standard Pear,	4 to 6 “	40 per 100 ; per 1000	350 00
Dwarf “	2½ to 4 “	25 per 100 ; per 1000	225 00

Osage Hedge Plants, 2 years, per 1000, \$3 50; Honey Locust Hedge Plants, 2 years, per 1000, \$7; Wilson's Albany Strawberry Plants, per 1000, \$3; Concord Grape Vines, 1 year, No. 1, per 1000, \$30; Concord Grape Vines, 1 year, No. 2, per 1000, \$20; Silver Maple trees, 9 to 12 feet, per 100, \$40; Silver Maple trees, 7 to 8 feet, per 1000, \$20.

 SEND FOR A CATALOGUE. 

augtf

BRONZE TURKEYS,

(From 62 pound parents.)

FANCY CHICKENS, POLANDS. Those everlasting layers and most beautiful lawn ornaments, PURE WHITE, BLACK WHITE CRESTS, SILVER and GOLDEN, LIGHT DARK BRAHMAS, WHITE, BLACK COCH-INS and GAMES.

If ordered at once will close out my stock at reduced prices.

F. EVANS, No. 5, St. Paul Street,

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BALTIMORE, MD.

FALL STYLES, 1874.

CHARLOTTESVILLE WOOLEN MILLS SAMPLE CARDS

Are now ready for mailing. Our assortment embraces

TWENTY-FOUR PATTERNS.

Merchants desiring samples, will please address,

CHARLOTTESVILLE WOOLEN MILLS,
CHARLOTTESVILLE, VA.



MALTBY HOUSE,

BALTIMORE, MD.
C. R. HOGAN, Proprietor.

Has just received a series of costly and elegant improvements, embracing every department of the Hotel, making it one of the finest Hotels in the city.

Board reduced to \$2.50 per day.
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BAUGH'S STANDARD MANURES. BAUGH & SONS

High Grade Manure for Tobacco and Grain

BAUGH'S RAW BONE TRADE MARK

SUPER-PHOSPHATE OF LIME.

The old established article
ysis. Also Pure Ground Bones,
line of chemicals for making



sold under a guaranteed anal-
Pure Bone Meal, and a full
super-phosphates.

BAUGH & SONS,

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No. 103 South Street, BALTIMORE, MD.

Piedmont Air-Line Railway.

Richmond and Danville, Richmond and Danville R. W., N. C
Division, and North Western N. C. R. W.

CONDENSED TIME TABLE.

In effect on and after Sunday, October 12th, 1873.

GOING NORTH.			GOING SOUTH.		
STATIONS.	MAIL.	EXPRESS.	STATIONS.	MAIL.	EXPRESS.
Leave Charlotte,	10.00 P. M.	8.15 A. M.	Leave Richmond,	1.28 P. M.	5.00 A. M.
" Air-Line Junction,	10.06 "	8.30 "	" Burkeville,	4.45 "	8.29 "
" Salisbury,	10.06 A. M.	10.21 "	" Danville,	9.18 "	12.48 P. M.
" Greensboro,	3.30 "	12.45 P. M.	" Greensboro',	12.20 A. M.	3.50 "
" Danville,	6.20 "	3.12 "	" Salisbury,	2.38 "	6.06 "
" Burkeville,	11.35 "	7.36 "	" Air-Line Junction,	4.29 "	8.10 "
Arrive at Richmond,	2.17 P. M.	10.17 "	Arrive at Charlotte,	4.35 "	8.15 "
GOING EAST.			GOING WEST.		
STATIONS.	Read down.	MAIL.	Read up.	Arrive	MAIL.
Leave Greensboro'		3.30 A. M.			12.20 A. M.
" Co. Shops,		4.45 "			9.35 "
" Raleigh,		8.05 "			5.26 "
Arrive at Goldsboro',		11.15 "	Leave		2.30 P. M.

NORTH WESTERN N. C. R. R.

SALEM BRANCH.

Leave Greensboro' 4.30 P. M.; arrive at Salem 6.25 P. M.; leave Salem 8 A. M.; arrive at Greensboro' 10.00 A. M.

Mail trains daily, both ways.

On Sundays Lynchburg Accommodation leave Richmond at 9.45 A. M., arrive at Burkeville 12.45 P. M., leave Burkeville 5.35 A. M., arrive at Richmond 8.45 A. M.

Pullman Palace Cars on all night trains between Charlotte and Richmond (without change).

Papers that have arrangements to advertise the schedule of this Company will please print as above.

For further information, address

S. E. ALLEN,
General Ticket Agent, Greensboro', N. C.
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T. M. R. TALCOTT, Eng'r & Gen'l Sup't.

YOUNG MEN, BOYS & AGED MEN. MIDDLE

Trained for a successful start in business life, taught how to get a living, make money, and become enterprising, useful citizens. EASTMAN BUSINESS COLLEGE, Poughkeepsie, N. Y., On-the-Hudson, the only Institution devoted to this specialty. The oldest and only practical Commercial School, and only one providing situations for Graduates. Refers to Patrons and graduates in nearly every city and town. Applicants enter any day. Address for particulars and catalogue of 3,000 Graduates in business, H. G. EASTMAN, LL. D., Poughkeepsie, N. Y.

sep-11

NEW PEACH.

LATEST VARIETY KNOWN.

LEATHERBURY'S LAKE.

The 1st Premium was awarded to this Peach by the Pennsylvania Horticultural Society, October 23, 1872. The Fruit Recorder of November, 1872, thus describes it: : The Peaches were duly received, and without exception, are the finest specimen of a late sort we have ever seen or tasted. The specimens measured from eight to eight and one-half inches in circumference, and were of a paleish yellow color, tinged with a rich scarlet over the largest portion of the Peach. Pits very small. Flesh three-fourths to one inch thick, and of a light yellow, tinged with red. Near the pit, exceedingly juicy and rich. We should consider ourselves really fortunate if we could have one hundred trees of that sort in our orchard, for as plenty as the fruit has been this fall, such peaches would sell quickly for \$3.00 per crate, when ordinary late peaches were bringing but \$1.50. The trees are now offered for sale at \$5.00 per dozen by

J. H. PETERSON.

se-tf

Smyrna, Kent Co., Delaware.

TREES! TREES! TREES!

FALL 1874.

A VERY LARGE AND UNUSUALLY FINE STOCK OF

PEAR & APPLE TREES,

CHERRIES, CRAB APPLES, CURRANTS, GOOSEBERRIES,

Evergreens, Elms, Maples, Shrubs, Roses,

And a general Nursery Stock, at the

SYRACUSE NURSERIES,

SMITH & POWELL.

Syracuse, New York, Sep. 11th, 1874.

CHESAPEAKE AND OHIO R. R.

On and after SUNDAY, April 19th, 1874, passenger trains will run as follows:

FROM RICHMOND:

8:30 A. M. MAIL TRAIN.—For Gordonsville, Charlottesville, Staunton, White Sulphur, Hinton, and all intermediate Stations, daily (except Sundays), arriving at Hinton at 10:20 P. M. This train connects at Gordonsville for Orange, Culpeper, Warrenton, Manassas, Alexandria, Washington and the North, and at Charlottesville for Lynchburg, Bristol, Knoxville, Chattanooga and the South.

4:45 P. M. ACCOMMODATION TRAIN.—For Gordonsville and all intermediate Stations, daily (except Sunday), arriving at Gordonsville 8:30 P. M.

9:30 P. M. CINCINNATI EXPRESS.—For Gordonsville, Charlottesville, Staunton, Goshen, Milboro', Covington, White Sulphur, and all Stations west of White Sulphur, daily (except Sunday), arriving at Huntington, 5:30 P. M. This train connects at Gordonsville for Washington, Baltimore and the North, and for Lynchburg, Bristol, and the South, and at Huntington with the Steamers Bostona and Fleetwood for Cincinnati and all points West and Southwest, arriving at Cincinnati 6 A. M.

Baggage checked through.

FOR THROUGH TICKETS, rates and information, apply at 826 Main Street Ballard and Exchange Hotel, or at company's Office, Broad Street and Sixteenth

A. H. PERRY, General Sup't.

EDGAR VLIET, General Passenger and Ticket Agent.

JOHN LAIRD, FLORIST,

Offers to the public this Fall a large and fine assortment of GREEN HOUSE PLANTS, ROSES, EVERGREENS, GRAPE VINES and FRUIT TREES.

Also a large variety of HYACINTHS, CROCUS, TULIPS, and all other Fall bulbs at low rates. Catalogues on application.

Garden on Broad and Grace, bet. Henry and Smith,

Seed Store, 733 Main St. near Eighth

RICHMOND, VA.



35 Packages of Flower or Vegetable Seeds free by mail for one dollar. One beautiful Illustrated Catalogue of seeds and plants for 1874, free to all. Plants by mail a specialty. Address

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Seedsmen and Florists, Oil City, Pa.
Box 1775. mar—10t

THE NEW CLIFTON FRUIT CRATE and VEGETABLE CRATE, the best thing known for transporting Fruits and Vegetables. Will supersede all other articles used for these purposes. Took first premium and diploma at Maryland State Fair, 1873. First Premium and Diploma at Frederick Fair, 1873. First Premium or Medal at Virginia State Fair, 1873.

State, County, Farm, and individual Rights for sale by

E. B. GEORGIA & CO.,
Clifton Fairfax, Va.

nov—1y

FREE to all applicants, my Nursery and Bulb Catalogue. F. K. PHOENIX, Bloomington, Ill. sep—2t

AGENTS WANTED.—We are in want of a few first class SALESMEN to sell Nursery Stock in various parts of the country. We want men of good character, habits and business capacity, who can furnish undoubted references, and who will give their whole time and energy to the business.

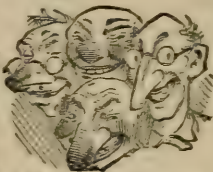
None need apply who cannot furnish references and bond. To such we can give constant employment with a good salary.

CHASE BROTHERS.
W. P. BISSELL, Manager, 914 Bank St., Richmond, Va. ju—6m

FORM 2.

See Pluck and Laugh!

Buy **PLUCK** and be Happy.

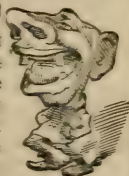


The jolliest, most rollicking, and plucky story ever told by painters' brush, is faithfully copied in these Chromos. They are 16 by 22 inches in size. Price \$10 the pair. Send orders to the publisher.

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LAUGHABLE and interesting in the highest degree are the Chromos Pluck. They should have a place in every counting room, office, and school house in the land. The lesson they teach is good as gold and silver. Price, \$10 the pair. Send orders to



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THERE is more fun in the Chromos **PLUCK** than any painted or printed story that has been given to the public for years. Never before has been accorded to any picture or set of pictures, the popularity these Chromos have attained. Size, 10 by 22 inches. Price, \$10 the pair. Address order to

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THE CROTON GRAPE.

Fine two-year old Plants of this variety by mail or express. Send for Price-List.

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15,000,000 Rings,
70,000 Ringers,
3,500 Tongue Sold

Hardware Dealers Sell Them.
Ringer, \$3. Rings per 100 Sets,
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Circulate free. Address
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Thoroughbred Stock for Sale.

I am breeding Thoroughbred DEVON CATTLE. ESSEX PIGS. SOUTH-DOWN SHEEP, &c.; also LIGHT BRAHMA FOWLS.

Persons ordering from me can rely on getting as good stock as any in this country. My herd of Devons are of the most improved strains. They took a number of first premiums at our last State Fair.

For further particulars, address
F. W. CHILES,
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Manufacturer of and Dealer in

CHILDREN'S CARRIAGES,

China, Glass and Willow Ware,

Toys of Every Description, Afghans,
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Invalid Chairs made to order; also repairing neatly done. Salerooms 412 Broad Street, and 737 Main Street. Factory 308, 312 and 314 Fifth Street, Richmond, Va. ap—1y

10,000 lbs. PRIME NEW CROP TURNIP SEED

Of all the most approved varieties. A large stock of FIELD and GARDEN SEED.

C. B. ROGERS, Seed Dealer,
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Aug—1t

\$240. AGENTS READ. One Canvasser made \$240 in one week. Samples sent free to all. Address W. H. CHIDESTER, 265 Broadway, N. Y. aug—4t

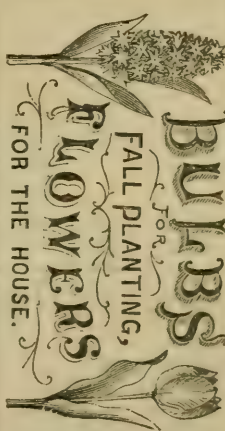
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Sep1y R. SINCLAIR & CO., 62 Light Street, Baltimore, Md.

50 assorted Evergreens sent by mail for \$1.
Address WM. MORTON & SON,
Allen's Corner, "Cumberland Co.," Maine.
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A. M. PURDY.
Palalmyra, N. Y.

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VICK'S CATALOGUE
of Hyacinths, Tulips, Lilies, and all

Particular attention given to copying and enlarging from old daguerotypes, &c. of deceased persons.




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FROM PEDIGREE AND PREMIUM STOCK.**

Cold Spring Poultry and Stock Yard, Baltimore Co., Md.

Address J. E. LLOYD, Richmond Market,
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 Fowls sent C. O. D. if desired. Refer by permission to
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RICHMOND, VIRGINIA.

JOHN W. RISON,

PROPRIETOR OF

HERMITAGE NURSERIES,
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1,500,000

Apple and Peach Trees,

FOR SALE THIS FALL AT REDUCED PRICES. FIRST-CLASS
APPLE TREES, \$16 per hundred. FIRST-CLASS PEACH
TREES, \$14 per hundred.

To Clubs ordering 1000 trees and sending the money with order, I will put
Apple trees, \$12 50 per 100; Peach trees, \$10 00 per 100.

These trees are warranted true to name, and are strictly first-class stock.

Orders should be addressed to

JOHN W. RISON,

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feb

To Nurserymen,

TREE DEALERS AND PLANTERS.

Our **Wholesale Catalogue** for **Autumn 1874**, now ready, and sent **FREE** to all applicants.

ELLWANGER & BARRY,

Mt. Hope Nurseries, ROCHESTER, N. Y.

Aug. 1, 1874.

aug1.

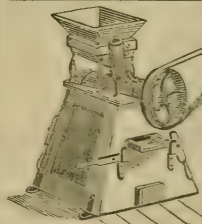


The above celebrated PLOWS, with the VERTEES Attachment, for adjusting the beam, furnished to farmers and dealers at low rates, and warranted to give satisfaction.

sep—ly

EDW. J. EVANS & CO.,
Nurserymen and Seedsmen,
York, Penn.

A complete stock of Fruit and Ornamental Trees, Garden and Flower Seeds, Seed Wheat, Seed Oats, Seed Corn, Seed Potatoes, Grass Seeds, &c. Send for Catalogue and price lists. feb-10t



Premium Farm Grist Mill.

Is simple, cheap and durable, and grinds all kinds of grain rapidly. It is adapted to all kinds of horse powers.

Also Union Railway Horse Powers, requiring a very low elevation and yet giving

more power than others. Also every variety of approved Implements. SEND FOR DESCRIPTIVE CIRCULAR.

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MORPHINE HABIT speedily cured by Dr. Beck's only known and sure Remedy.

NO CHARGE

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DR. J. C. BECK,
CINCINNATI, OHIO.

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MANUFACTURING CHEMISTS,

MANUFACTURER OF

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MORO PHILLIPS' TOBACCO INVIGORATOR, Price \$60; prepared especially for tobacco.

SEWANO GUANO, a natural organic deposit.

For sale at Depots: { 110 S. Delaware Av., Philadelphia, Pa.
95 South Street Baltimore, Md.

And by trade generally. Discount to dealers.

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THE CENTENNIAL

Is the **LIGHTEST RUNNING SEWING MACHINE**, without any exception. It is used by many of the best known families in Baltimore, and in many parts of Virginia.

Price only \$40 for No. 1 Machine.

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And upwards according to style and finish. The working pads being the same in all.

They are fully equal to any of the \$65 and \$75 Machines in the market.

They are all made of the best material, with fine long walnut tables, and run so lightly and noiselessly and work so beautifully that it affords pleasure to use them.

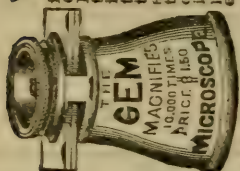
Granges in Maryland and Virginia are adopting them, and Masters will do well to write for circulars and samples to

J. S. GRIFFITH,

85 Lexington Street, Baltimore, Md.

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ful are the revelations of the GEM—the best and cheapest microscope for common use in the world. Scientific, valuable, instructive, entertaining, practical, amusing, astonishing. A treasure in every home. Thousands in use. Magnifies 10,000 times. Makes a egg of a hair, etc. Only \$1.50. Send money in letter and get it by mail, prepaid. Agents wanted. Address: Lowrey Co, 284 Walnut-st., Chicago

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Timothy, Herds, Clover,

Kentucky Blue Grass.

Send for Catalogue.

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Eggs, Cream, Milk and Lemon Biscuits, and every kind of Crackers, made a specialty. Pound and Fancy Cakes, Ginger Snaps, Lemon Snaps, Jumbles, &c., &c., &c.

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WHOLESALE PRODUCE DEALERS,
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A FINE ESTATE FOR SALE!

Containing one thousand acres, on which there is a good two-story dwelling situated in a beautiful grove. The out-houses, stables, barns, laborer's cottages complete; good water from a pump and spring not far from the residence. There is also a running stream through the Farm. The estate is well situated in a genteel neighborhood with churches convenient. Mail communication is regular by Railroad and Canal tri-weekly.

The estate is susceptible of being divided into four farms. There are two hundred and seventy acres cleared land, the balance in original growth. There is a good producing garden, all under a good enclosure.

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No Vacation—Enter any Time.

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PEAR TREES FOR THE MILLION.
Largest stock in the West: fine assortment; extra quality: packed to go safely any distance. Satisfaction guaranteed. Prices low by hundred or thousand. A full assortment of other trees, shrubs, plants, &c. Illustrated Catalogue mailed free to applicants. R. G. HANFORD
Columbus Nursery, Columbus, Ohio.
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SHEPHERD PUPS.

3 Scotch Colly Shepherd Pups (dogs) direct from importation, for sale at **\$10** each. A. M. BOWMAN,

Bellevue Stock Farm,
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E. D. HALLOCK,
WHOLESALE AND RETAIL DEALER IN
GARDEN, FIELD AND FLOWER
SEEDS,
No. 172 West Pratt Street, BALTIMORE.

The subscriber would respectfully inform the Farmers, Gardeners, and the Trade that he has now in store a complete stock of SEEDS, of all the varieties suited to this market, selected with care, in which he offers at wholesale and retail in quantities to suit, on as liberal terms as any other reliable house. He solicits an examination of his stock, and is confident in his ability to give satisfaction. He will be supplied with a choice selection of Flower Seed from MR. JAMES VICK, Florist, Rochester, N. Y., for sale at his catalogue Prices. **XX EARLY KENT PEAS** a specialty.

Coe's Ammoniated Bone Phosphate, price \$50, cash per ton of 2,000 lbs.
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Bet. Maltby House and Light St. **E. D. HALLOCK, 172 W. Pratt St.**

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MANUFACTURERS OF

Hachtel's Ammoniated Superphosphate,
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BONE DUST, GENUINE LEOPOLDSHALL KAINIT (German Potash Salts),
MURIATE OF POTASH, BONE MEAL, and FERTILIZING
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Liberal discount to dealers and others who buy largely for cash.

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SEED WHEAT! SEED WHEAT!

American Fruit Driers, Grain Drills and Threshing Machines.

CHOICE POULTRY AND OTHER CHOICE STOCK.

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Roses a Specialty.

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SUPER-PHOSPHATE.

THE CONCENTRATED MANURE.

This celebrated Fertilizer always produces full crops of WHEAT, RYE, OATS, TOBACCO, COTTON, CORN and POTATOES.

It is a permanent improver of the soil wherever it is applied.

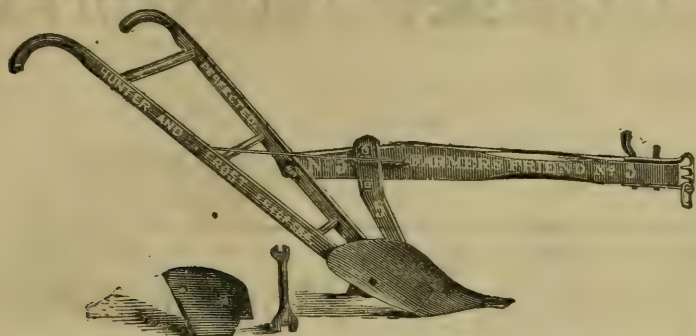
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E. G. EDWARDS & CO.,

No. 21 Cheapside, BALTIMORE, MD.

N. B.—Our Phosphate Pamphlets, with Certificates from prominent farmers sent free on application.

PERFECTED Farmer's Friend Plows.

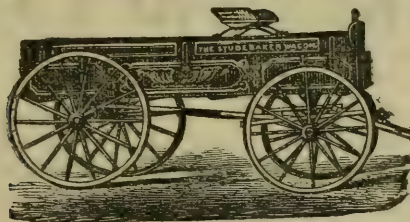


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RIGHT HAND.			LEFT HAND.		
No. 5,	.	\$5.50	No. 7,	.	\$ 8.00
No. 7,	.	7.50	No. 8,	.	10.00
No. 8,	.	8.00	No. 10,	.	13.00

We have exclusive control of the above celebrated Plows for this market.

THE STUDEBAKER



Farm and Freight Wagon.

The Cheapest, Finest Finished, and Most Substantial Wagon made in this Country.

For FARM USE, we recommend the 3½ Thimble Skein Wagon, with drop pole, spring seat, and top body, with whiffletree, neck yoke and stay chains.

PRICE \$120.

BRAKES furnished when desired at an additional cost of \$5.

H. M. SMITH & CO.,

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Manchester Tile Works.

TILES of all sizes at low prices.

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WATERS' NEW SCALE PIANOS,

SQUARE and UPRIGHT, are the best made. The touch elastic, the tone powerful, pure and even through the entire scale, yet mellow and sweet.

WATERS' CONCERTO ORGANS, cannot be excelled in tone or beauty; they defy competition. The Concerto Stop is a fine imitation of the Human Voice.

Warranted for 6 years. **Prices Extremely Low** for cash or part cash, and balance in monthly payments. **AGENTS WANTED.** A liberal discount to Teachers, Churches, Ministers, Schools, Lodges, &c. **Illustrated Catalogues mailed.**

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nov—2t

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DARK BRAHMAS,

CHEAP.

\$2.25 per pair, 3.25 per trio—
coopd and delivered at Swoope's
Depot, with feed to destination.
Terms Cash.

G. W. SHUEY,

Swoope's Depot,

Augusta Co

nov—1t

THE SOUTHERN PLANTER AND FARMER

HAS NO SUPERIOR IN THE SOUTH, HAVING A LARGE CIRCULATION
AMONGST THE MOST SUBSTANTIAL FARMERS AND BUSINESS MEN,

In the country—the best customers to every trade, not only on account of the substantial character of those to whom it is sent, but likewise by the fact that possessing the additional advantage of being in book form and stitched; it is, therefore, more apt to be preserved than an ordinary newspaper, and gives ADVERTISERS A BETTER CHANCE OF KEEPING THEMSELVES BEFORE THE PEOPLE!

TERMS FOR ADVERTISING.

One square, 10 lines or less, one insertion...\$2 00	1 1/2 page six months.....\$55 00
1 square of ten lines for six months.....10 00	1 1/2 page one year100 00
1 square of ten lines for one year.....15 00	1 page single insertion.....20 00
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1/4 page one year.....55 00	1 page one year.....180 00

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All communications to be addressed to

L. R. DICKINSON, Proprietor,

P. O. Box 54, Richmond, Va.

ESTABLISHED 1866.



PATENTED.

WHEAT FERTILIZER

PREPARED BY THE

SOUTHERN FERTILIZING CO.

RICHMOND, VIRGINIA,

PRICE, \$55 PER TON, IN RICHMOND.

This article is prepared for the latitude of Virginia and North Carolina, and can be obtained at every point of importance in the two States.

July—3t.

TO WHEAT PLANTERS.

THE CONTINUED SUCCESS OF THE

Soluble Sea Island Guano,

Must convince the most skeptical farmer of its excellence as a wheat manure.

Stony Point Mills, Cumberland Co., Va., Nov. 20, 1873.

Mr. JOHN BOOKER.

Dear Sir:—You request me to give you a statement in relation to the Soluble Sea Island Guano. I used it on the tobacco crop at the rate of 200 pounds per acre, and am as well pleased with the results as with any guano I have used. I shall use it in preference to any of the Fertilizers.

Yours, very respectfully,

ZACH. T. GOODMAN.

Talbott County, Md., August 10th, 1874.

Mr. J. A. F. NEAL, of Talbot Co., says: I am pleased to inform you that I can refer to almost all I sold to last fall, and they will give a good word; indeed, in some cases the Soluble Sea Island Guano has beaten everything else used in the county.

Prince Edward County, Va., Nov. 15, 1874.

To Z. A. BLANTON, Farmville, Va.:

This is to certify that I used on tobacco during the year 1872, one and a half tons of Sea Island Guano, and it came up to recommendations in every particular. It acted for me as well as Peruvian Guano, and I am so well pleased with it that I cheerfully recommend it to my neighbors and friends, and expect to use it freely next year, and I prefer it to any I have used for a long time.

R. W. SCOTT.

Goldsboro, N. C., Jan. 10, 1874.

Messrs. R. W. L. RAISIN & Co.

Gentlemen.—I have acted as agent and sold your Soluble Sea Island Guano for three years, and my sales have steadily increased each year. The Guano has given entire satisfaction wherever used, and I have yet to hear the first one who has used it speak of it except in praise. I have used it on my own farm with entire satisfaction, and am well satisfied it will repay all who use it.

Respectfully,

JOHN H. POWELL.

H. P. POPE, Agent Soluble Sea Island Guano.

Sir:—I used, this year, Gilham's Fertilizer, Patapsco, Peruvian Guano, and the Soluble Sea Island, and am confident in saying the Soluble paid better than any other. Shall want it again.

DR. C. D. BARHAM.

Do not hesitate to say it is a good Guano.

Poplar Mount, Greenville Co.

Gentlemen:—I have tried your Sea Island Guano on cotton, and do not hesitate to say it is a good guano.

WM. A. TROTTER.

R. W. L. RAISIN & CO.,

Corner of South and Water Streets, - - BALTIMORE.
AND
Cor. East Tabb and Sycamore Sts. - - PETERSBURG, VA.

THE SOUTHERN PLANTER & FARMER,

DEVOTED TO

Agriculture, Horticulture, and the Mining, Mechanic and Household Arts.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON,	. . . . .	PROPRIETOR
FRANK G. RUFFIN,	. . . . .	EDITOR.

New Series. RICHMOND, VA., FEBRUARY, 1875. No. 2.

PATRONS OF HUSBANDRY.

The proceedings of the late annual meeting of the State Grange of Virginia, Patrons of Husbandry, will be found below. They are not as fully reported as I could have desired, for a reason which the humanity of all readers will appreciate. On the first night of the meeting a stable, carriage and horses of the editor were burned by an incendiary. This made in actual, complete conflagrations, in fires, (including two upon my mansion in the dead of night, which had made dangerous headway before they were subdued,) and in attempts, abortive, but actual, thirteen distinct acts of incendiarism. It is obvious that it was my duty to remove my family from a scene of so much disturbance and real danger; and I was compelled to inaugurate arrangements to that end at once. The time occupied in these arrangements, and in others growing out of it, has been that much abstracted from the *Planter and Farmer*.—THE EDITOR.

ANNUAL MEETING OF THE STATE GRANGE OF VIRGINIA.

The second annual meeting of the State Grange of the Patrons of Husbandry of Virginia met in Richmond on the 13th of January. About 150 delegates were in attendance at the opening, but during the progress of the meeting many more appeared, who had been prevented by stress of weather from appearing at the roll call.

The Grange was called to order at 11 o'clock, by Master J. W. White.

The following officers answered to their names: Master, J. W. White; Overseer, *pro tem.*, J. W. Southall; Lecturer, J. W. Mor-

ton: Steward, William McComb; Assistant Steward, *pro tem.*, C. T. Sutherlin; Chaplain *pro tem.*, Dr. William T. Walker; Treasurer, W. B. Westbrook; Gatekeeper, J. J. Wilkinson.

William Taylor, of Clarke county, Overseer of the State Grange, tendered his resignation, which was accepted.

The examination of credentials occupied much of the time of the Grange during the morning session.

The Master made his annual report, an abstract of which we publish below:

MASTER'S ANNUAL REPORT.

Brothers of the State Grange:

Through the beneficence of an all-wise Providence, we, tillers of the soil, are permitted to assemble for the first time in annual session in the history of our Order, to examine, deliberate, and discuss questions relating to our peculiar interests and daily avocations. Coming as we do from every quarter of this great Commonwealth, representing every portion of the State from the seaboard to the mountains, united in one common interest, it is most mete and proper that we invoke harmony and concord, practice forbearance and charity, cultivate hope and fidelity. I congratulate you to-day on the rapid progress of our Order in the State. One year ago the State Grange was organized with ten Granges. Since then the number of subordinate Granges within our jurisdiction has increased to —.

In consequence of this large increase in our numbers it was thought it would be necessary to adopt the expedient offered by the Executive Committee of the National Grange, which allows the Executive Committees of the respective Granges to reduce the number of representatives of the State Grange upon such basis as the circumstances of each case might require. Your Executive Committee concluded, though the number would be large and unwieldy, that the interest and good of the Order might be promoted and advanced by not interfering with its representation, and allow each subordinate Grange to be represented at our first annual meeting.

Some legislation reducing your representation in the State Grange for your future sessions will be necessary.

It must be apparent to all, with the rapidity the Order is growing in the State, it would be utterly impossible in an assemblage composed of one representative from each Subordinate Grange to transact business with either wisdom or dispatch. Besides, the expenses of such a convention would be too heavy a tax upon the members of the Order.

The constitutional amendments submitted to you and voted upon at an extra session held in this city on the 31st of March, 1874, have not yet been ratified by the required number of Granges. This unavoidable delay has very much impeded our progress in effecting our business relations. The establishment of County and District Granges authorized by those amendments has not been perfected.

The necessity for some organization intermediate between the

State and subordinate Granges has been so generally felt throughout the Order that I have recommended the establishment of such Granges, which have been found of great value in accomplishing the auxiliary designs of the Order.

Where they have been formed the Order has been strengthened, and much pecuniary benefits received by the members. There is but one opinion as to the necessity of these organizations, and soon they can be established with full constitutional authority. I would suggest, to facilitate these organizations, that you adopt this or some similar resolution: "As soon as the secretary of the State Grange is notified of the ratification of the amendments to the constitution of the National Grange by the proper authority, your Executive Committee be authorized to establish regulations for the organization of County and District Granges."

The report of your Executive Committee will inform you as to what has been done in the matter of agencies and co-operation. This has been the most difficult part of our work, and has occasioned more disappointment than any other feature of our Order. There are two prominent reasons that have led to this disappointment:

1st. There is a misunderstanding which seems to prevail in regard to duties of Patrons to each other and to the Order. They seem to forget that our organic law provides for an association intended for co-operative purposes, each part of which is dependent upon some other to make it effective. These parts, taken singly, are weak; but when all are combined make a machine of wondrous power and utility. They lose sight of our business purpose. It is prominently set forth—that of "meeting together, talking together, working together, buying together, selling together, and, in general, acting together for our mutual protection and advancement."

2d. The system adopted by your Executive Committee is totally defective. It fails to furnish the members with the necessary business information, and cannot make the necessary business negotiations that the interest of the Order demands, and totally fails in co-operative action with the agents of other States.

These defects are to none more glaring than to your Executive Committee, and while it was unsatisfactory to them, they knew they had no constitutional authority to adopt a better, but have waited with impatience your meeting, hoping you would take hold of this subject and adjust it to meet the wants of the Order.

It will be necessary to make some change in your system of deputies, and provide some additional mode of paying them. During the past year we have employed deputies in the dissemination of the Order, and the rapid multiplication of the Granges in the State is largely due to their efficiency. Up to this time these positions have often been sources of revenue to the State Grange, and have always been self-sustaining by the dues the deputies received from the new Granges; but such will not be the case in many of the counties that have the full number of Granges. In such counties in the future

the prosperity of the Order is to be expected in conserving and strengthening the Granges already in existence.

I have for some time been impressed with the importance to the machinery of our Order of a medium of communication through which matters of general interest might be transmitted to our members without the tedious, expensive, and laborious process of private correspondence. The necessity of some such medium induced the Executive Committee to issue a circular letter to the subordinate Granges tending to the establishment of an organ to the Order. The proposition received favor from many of the Granges, but finding it would not be possible to establish such a paper before this our annual meeting, induced them to make terms with Dr. Dickinson, the proprietor of the *Southern Planter and Farmer*, with Colonel F. G. Ruffin as editor, to be used as the organ until our meeting, when we were induced to believe it would receive that consideration and favor at your hands that would result in permanently establishing a paper for the Order. It is needed not only as a channel of communication between the officers of the State Grange, but the members of the Order feel the want of an organ, through which they may confer with each other. The tendency of a common organ will be to unite the farmers and build up the Order throughout the State. We shall through its columns become better acquainted, and be brought more in sympathy with each other. Its regular visits will increase our interest in the Granges by keeping us constantly advised of its progress. I do not propose to discuss the advantages of an organ, or the plan upon which one shall be conducted, but to ask that it receive such consideration at your hands as its importance demands.

I call your attention to the necessity of taking some action by which your State, district, and county subordinate Granges can be cheaply incorporated. It would afford protection and security to the property of the Grange, and patrons would be indemnified against any loss in their business transaction with their business agents.

Among the subjects that will claim your attention, there is probably none of more practical importance than that of commercial fertilizers. The amount of money annually expended by the farmers of Virginia in their purchase, and the extent of fraud which is being practiced upon them by speculators in the sale of worthless compounds, is startling and alarming. Still, I feel confident that commercial fertilizers will be largely used by our farmers, notwithstanding all the frauds practiced upon them. I feel satisfied that successful agriculture in our State can only be attained by a liberal use of an honestly made superphosphate, sold at reasonable rates. I claim it is a duty we owe ourselves and the whole agricultural interest of the country to attempt some means of reforming the frauds and abuses of the trade in the articles.

I am aware this subject received much of your attention in the subordinate Granges. Your Executive Committee has disposed of this subject in its sessions, and have taken steps as far as they could

to protect you; but they had no authority to inaugurate means to entirely relieve you. And if they had they would have been unable to pledge your co-operation and support, which would have been necessary to have insured success, but were confined in their labors to making the best terms they could with existing manufacturers to furnish you their own superphosphates, made by their own formulas, trusting and believing when you met in annual session you would give this great subject the consideration its importance demands.

I return you my sincere thanks for your prompt and timely relief rendered the destitute and suffering members of our Order in Louisiana. Little do we know the suffering and grief that was turned to gladness in those destitute sections of our Southern country by the timely assistance rendered by our Order. Again are we called upon by our destitute and suffering brotherhood in Nebraska, caused by the ravages of the grasshopper. Many sections of the State were left a perfect waste. Without timely aid none can tell the suffering of those people during the present winter. I know you will be swift in discharging so holy a duty, and in so doing exhibiting the truth of holy Scripture, when it declares that it is more blessed to give than to receive. Such acts of brotherly kindness will commend our Order to the patriot and philanthropist.

The year just closed (the first of the Order in the State) has been one of organization. It has taken almost our entire time. With thorough organization our business relations would be more easily adjusted. Now, to you, gentlemen, the chosen representatives of the Order, is assigned the duty of shaping and perfecting our business relations. This is an important and responsible trust. In your hands is the destiny of this Order in Virginia. With you it rests to be seen if agriculturists can form co-operative associations. The Order is looking anxiously, but with confidence, and hope you can, and in your wisdom will, inaugurate some system of agricultural reform that will work their own sustenance, and instill new life and energy throughout this old and great Commonwealth. Patrons, I believe we can. We have already much to encourage us in this great work in which we are engaged.

My confidence is unshaken and increasing in this Order. Upon the agricultural prosperity of the country rests all true natural prosperity. A more enlightened and higher development of agriculture does not only benefit the agriculturist, but throws a corresponding benefit upon all other trades and professions. I firmly believe this Order, with the blessing of Providence, is destined to do much towards renovating and restoring society, and purifying the political atmosphere of this whole country. Already is seen sectional prejudices receding under the influence of its enlightened rays. If we, as agriculturists, identified in one common interest, united in one common brotherhood, knowing no North, no South, no East, and no West, go forward in our co-operative strength with an honest purpose of retrenchment and reform, and be true to ourselves and the

obligations we have taken, no one can tell the career of usefulness that awaits this great Order. Then let me, in the name of the Order and the great interests you represent, invoke your earnest attention to the business before you.

REPORT OF EXECUTIVE COMMITTEE.

The Executive Committee made quite a lengthy report, which our limited space prevents us from publishing. It urges the procuration of a charter from the Legislature for the State Grange, reciting the advantages which will accrue therefrom; notices the appointment of certain business agents; states that the State Grange of North Carolina has adopted the agents appointed in Richmond, Norfolk, and Petersburg; states what has been done in the matter of an organ for the Order, and gives a general review of the business done by the committee since the last annual meeting and the business arrangements for the future.

Adjourned to 10 A. M., 14th January.

SECOND DAY.

The Grange was opened by Master J. W. White at the time to which it adjourned.

A number of members presented themselves and had their names enrolled.

The Treasurer and Secretary each made their annual reports, and they were respectively referred to their appropriate committees.

The Special Committee to whom was referred the report of the Executive Committee made a report which is crowded out.

Quite an animated discussion arose during the morning hour upon sundry propositions memorializing the National Grange to so alter the law as to allow other than Masters of subordinate Granges to represent them in the State Grange. The memorials were finally adopted.

TRANSPORTATION COMMITTEE'S REPORT.

The Committee on Transportation made the following report, which was unanimously adopted and ordered to be printed:

The Committee on Transportation made the following report, which was unanimously adopted and ordered to be published:

The Committee on Transportation have had under consideration the subject referred to them, and beg leave to submit the following report to the Convention:

One great evil under which the agriculture of our State and of the whole country is languishing is the want of proper facilities for transportation. The expenses of transportation in some instances are so great as to prohibit absolutely the movement of the products of the soil; in others, a large portion of the value of such products is paid to the transporter. In the remote West and Northwest it is not uncommon to burn corn for fuel. The farmer cannot afford to send his corn to the Eastern market, and he cannot afford to pay the

cost of moving to his farm the coal or the wood which he requires. We are told in the report (see page 147) of the Senate Select Committee on Transportation routes to the Seaboard that it costs now more than 45 cents to send a bushel of wheat from the Mississippi to the seaboard; and the Western farmer represents that, with proper transportation facilities, it ought not to cost more than 20 cents. This is for a distance of (say) 1,500 miles. Forty-five cents a bushel for 1,200 miles is \$15 a ton and $1\frac{1}{4}$ cents per ton per mile. This the Western farmer complains of, and justly; for it is perfectly true that the work ought to be done, as he alleges, for 20 cents a bushel, which is but little over 5 mills per ton per mile. The Virginia farmer pays on his wheat and corn, and other products, on an average from 4 to 5 cents per ton per mile to get them to market. For a hundred miles the average charge is about \$5 per ton, or about 15 cents a bushel. If the charge for transportation were only 1 cent per ton per mile, instead of 5, the saving on each bushel for 100 miles would be 12 cents. If we suppose the average wheat crop of Virginia to be 10,000,000 bushels, and that only one-third of it is moved one hundred miles, the annual tax on the farmer in this article alone amounts to \$400,000—the exorbitant charges on our corn, and our tobacco, and all of our other farm products to be added. It is a reasonable conjecture that the farmers of Virginia, in their present struggling and impoverished condition, pay an annual tax of this sort of a million and a half or two millions of dollars to the railroads. It is replied by the railroad companies that they cannot work at lower rates and maintain their roads. It is true, however, that at the present time, the Chesapeake and Ohio railroad is transporting wheat from Huntington to Richmond for 15 cents a bushel, which (the distance being 421 miles) is about 11 mills per ton per mile. And yet, from Louisa Courthouse, or Charlottesville, or Staunton, the charge is, we believe, about 5 cents a ton a mile. It is the same with coal: The Chesapeake and Ohio road is delivering Quinnimont coal at its wharves in Richmond to vessels at the rate of 1 cent per ton per mile for the transportation. It appears, therefore, that our railroads are working for 10 or 11 mills per ton per mile for those outside of the State, while our own people have to pay five times these prices for the transportation of their products and that of the commodities purchased and consumed by them. It is evident that either the railroads *can* work for 1 cent per ton per mile, or that the losses incurred by them on their through traffic are made up by laying additional burdens on the farmers of the State. In the State of New York the Erie Canal has always been the regulator of the railroads, and invariably, as the winter sets in, and the canal is blocked by ice, they put up their rates 40 per cent. It is believed that the completion of the James River Canal would have a similar effect in Virginia. The rates of transportation by water are necessarily cheaper than the railroads can afford; and a river-course or a canal has this

marked advantage over a railroad or a number of railroads; that the latter invariably become a *monopoly*, while the water-course is like a public highway on which all may travel. The rates of transportation on the Mississippi and Ohio rivers when there is plenty of water are not more than $1\frac{1}{2}$ or 2 mills per ton per mile. The present rates on the Erie canal, exclusive of tolls, are about 8 mills per ton per mile by the horse-boats. But the rates on this canal are considerably greater than they would otherwise be, in consequence of the boats being compelled to lie idle four and a half months in the year. The season of navigation is only some two hundred and twenty-five days. The charge on a bushel of wheat from Buffalo to New York has been for the past five years about 12 cents, including tolls. A great revolution is now in progress, however, on the Erie canal. After continued experiments for five years, it has been demonstrated, beyond all doubt, that *steam* can be successfully substituted for animal power, and already there are some ten or twelve steam-propellers running on the canal. These during the past season have been, it is stated by a New York paper, carrying wheat from Buffalo to New York for 5 cents a bushel, which is less than half the charges by the horse boats. These steamers make also double the speed made by the horse-boats, and are securing *return cargoes* of general merchandize, which have heretofore been monopolized by the railroads.

The scheme for the completion of the James River and Kanawha canal contemplates much larger boats than those now used on the Erie canal; and this will also materially diminish the cost of transportation. It is believed that with boats of 34 and 35 tons and steam on the canals, the charges, including the tolls, would not exceed 4 mills per ton per miles; while the opening of such a communication between tide-water and the iron-fields of Virginia, and the coal-fields of West Virginia would develop branches of industry in the valley of James river whose beneficent influences would strengthen and add to the prosperity of the whole State. Every day is adding new confirmation to the wonderful character of the mineral deposits which extend from Louisa and Orange and Buckingham to the capital of West Virginia. The Quinimont coal vein, which has been just opened between the Hawk's Nest and Meadow river, is yielding a coal which is regarded as superior to the Connellsville coal for cooking purposes, and as superior to the Cumberland coal for steaming purposes. The tobacco manufacturers in Richmond are discarding the Cumberland coal and using the Quinimont. One iron furnace, yielding 10,000 tons of pig-iron a year, is said to be worth \$100,000 in the way of annual revenue to a railroad which passes by it. And if it be true, as we have reason to believe it is, that pig-iron on the line of the canal can be manufactured for far less than the present cost outside of Virginia, we may fairly calculate on seeing such furnaces springing up, as they are now doing on the line of the Chesapeake and Ohio railroad.

While it is obvious from the foregoing statement that the completion of the water line to the Ohio river would greatly diminish the

cost of transportation in and through the State, it is equally plain that it can only be constructed by the Federal Government, for not only is the State prohibited by its Constitution from making appropriations to works of internal improvement, but the impoverished condition of our people renders all investments in any such enterprise hopeless. Nor will it do to rely on the old and hackneyed recourse of appealing to the communities, in and out of the cities, to guarantee the bonds of a bankrupt company that has long ceased to meet its obligations, and whose receipts barely suffice to meet its necessary expenditures. Indeed, other considerations apart, the interest on the debt of the incorporated cities becomes every year more and more onerous, and no hope can be entertained of constraining or inducing them to make such guarantee except by arraying the united vote of the pauper class against the property-holders. If any appropriations can be made to works of internal improvement by the General Government it is easy to demonstrate that this great water-line is entitled to paramount consideration by that Government, as it must become the chief highway from the great West to the seaboard.

The abuses of the present railroad system are too notorious to require proof. They are run in the interest of companies—most of them foreign to the State—and they have never been known to have been visited by a generous impulse, or to feel either remorse or pity. They are ready (it is the genius of trade) to sacrifice the State, the cities of the State, and the individual citizen, to any arrangement which will benefit the limited rings who control them. One of them has spent (on paper) fabulous sums of money to reach its terminus—a sum so great that none of us (who are mere lookers-on) can by any ingenuity account for the expenditure. The city of Richmond was frightened into making it a present at the last moment of \$300,000. In favor of another the State has practically surrendered within a few years \$400,000 on the express condition that it should complete a connection running west; and the first spade has not yet been stuck in the ground, although the period set for the completion of the work has passed. One is owned in Baltimore, two in New York, a fourth in Pennsylvania, and two others are owned by a majority of stockholders residing in the northern States and in Europe; and, while remote from each other, are under the same management and control. One of them, having been guaranteed by the State against competition for thirty years, needs no protection now, and defies opposition. Most of them disregard their obligation and utterly ignore the maturity of their bonds; and three of them have failed to meet their interest; while the fourth only accomplished this labor by systematically neglecting to pay its employees, and came among us originally with a parade of virtue which the other Northern companies did not pretend to.

It is a notorious fact that notwithstanding the exorbitant charges on transportation over all of these roads no effort is made to economize their expenditures, but, on the contrary, the cost of administration

is increasing steadily and enormously. No dividends are declared to the stockholders, as the tendency of exorbitant charges is necessarily to drive off business, and the management, which absorbs all of the profits, seems to be satisfied if their salaries are paid. On some of these roads the salaries have been greatly increased, if not doubled, since the close of the war, and are greatly disproportioned to those paid for similar, and in many instances greater services, requiring higher qualifications and the discharge of more important duties to the State and the country. The salary of the Governor of the State is \$5,000; that of Attorney-General, \$2,000; the Judges of the Court of Appeals, \$3,000 each, with the addition of \$200 to be paid to the president; while the salaries paid to railroad presidents in this State before the recent panic ranged from \$5,000 to \$25,000 each per annum; the counsel for the railroads are paid as much as \$5,000 per annum with assistant counsel at the rate of several thousand dollar in addition. And some of these roads have vice-presidents, also receiving large salaries, besides members of the Board of Directors, who are also paid officers. In addition to these extraordinary expenditures each road has an army of *friends* riding *ad libitum* on free passes, and, perhaps, subsidized thereby to sustain them whenever and wherever necessary, and burdening the cost of transportation to the detriment of those who pay for it in *money*. These privileged classes embrace officers of the Government, and particularly members of the Legislature and their families during their term of service. Is it remarkable that the legitimate owners and patrons of these roads should reap little or no profit under the above condition of affairs, or that our legislative bodies should present a scene of bitter and acrimonious railroad contests and struggles, periodically, concerning which charges are rife, and generally credited, impugning the honor and integrity of members, and degrading our State in the estimation of the world? Is it not manifest that large sums of money are expended by these railroad corporations in paying lawyers and lobbyists, if not in bribing members themselves, to promote their schemes by corrupt legislation? Where does the money come from for these purposes if not from the earnings of the roads? And when and upon what road have the stockholders authorized such expenditures? The fact is that the people in many counties of the State, elect, but do not control, their delegates, who practically take service under the several railroad organizations in the State, and look to them for reward in one shape or another. Public opinion has ceased to be strong enough to prevent or control this evil, and one of the paramount duties of the Patrons of Husbandry is to use their immense power to cleanse the legislative branch of the Government of this festering sore and moral leprosy.

We congratulate our Order that with singular unanimity at the last annual meeting of the Grange it voted down a motion to ask or accept free passes from the railroads for the use of its members.

LEWIS E. HARVIE, }
WILLIAM M. AMBLER, } Committee.

At the hour of 12 the special order of the day being the consideration of the constitution and by-laws, was taken up, and proceeded with to the hour of adjournment.

EVENING SESSION.

During the previous sessions a large number of resolutions relative to the inspection-laws, dog-laws, immigration, &c., &c., had been read and appropriately referred. Up to the close of the session last night, only one or two of these committees had reported.

Last night resolutions of sympathy with Col. F. G. Ruffin in the destruction of his stable by incendiarism on the night before were presented and passed.

The resolution also looked to memorializing the Legislature to pass more stringent laws to stop this crime. The last resolution, as was also one offering a reward for the incendiary, were referred.

The committee appointed to present to the committee of the Legislature the resolutions adopted by the Grange on the subject of Inspections of Tobacco, reported that they had performed that duty.

The further consideration of the constitution was resumed, and continued up to the time of adjournment without having reached a vote on it as a whole.

At 10 o'clock the Grange adjourned until January 15.

THIRD DAY—MORNING SESSION.

The constitution adopted by the Grange Thursday night having to some extent altered the duties of officers, and they having been elected one year ago for *two years*, in order to leave the Grange untrammelled, all the permanent officers resigned, and the Grange went into the election of officers with the following result: Master, Col. J. W. White,* of Charlotte county; Overseer, Thomas T. Tredway, of Prince Edward; Lecturer, J. W. Morton,* of Charlotte; Steward, Gen. Wm. McComb, of Louisa; Assistant Steward, J. B. Dunn, of Washington county; Chaplain, Rev. John C. Blackwell, D.D., of Buckingham; Treasurer, W. B. Westbrook, of Petersburg; Secretary, M. W. Hazlewood, of Henrico; Gatekeeper, Martin B. Hancock, of Charlotte; Ceres, Mrs. Thomas Horner,* Flora, Mrs. J. W. Lewellen;* Pomona, Mrs. M. W. Hazlewood;* Lady Assistant Steward, Mrs. T. O. Graves.*

Before concluding the election of officers the Grange took a recess until 3 o'clock.

AFTERNOON SESSION.

At this session the Grange proceeded to fix the salaries of the several officers of the body. Much time was consumed in this proceeding, but they were finally placed at the following figures:

Master: \$500 per year and expenses.

* Re-elected.

Lecturer: \$3 per diem and six cents per mile traveled in the performance of his duty.

Treasurer: \$600 per year and expenses.

Secretary: \$1,000 per year.

Executive Committee: Chairman, \$300 per annum; the other members, \$200.

This concluded all the amendments to the constitution which had been presented for consideration, and the question then recurring on its acceptance as a whole, it was unanimously adopted.

CONSTITUTION.

ARTICLE I—Name.—This Grange shall be known and distinguished as "The Virginia State Grange of the Patrons of Husbandry."

ARTICLE II—The Constitution of "the Order of the Patrons of Husbandry," as published by the National Grange, is hereby accepted and adopted as the fundamental law of this Grange and its Subordinate Granges, so far as the same may be applicable.

ARTICLE III—Members.—The State Grange shall be composed of Masters of Subordinate Granges, and their wives who are Matrons.

Past Masters, and their wives, who are Matrons, are honorary members, and shall be eligible to office, but not entitled to vote.

ARTICLE IV—Meetings.—This Grange shall hold regular annual meetings on the second Tuesday in January, at such place as the Grange may, from time to time, determine.

Special meetings may be called by the Master, with the approbation of the Executive Committee, and shall be called by the Master upon the application of fifty Masters of Subordinate Granges. In either case, written notice shall be given to each Subordinate Grange thirty days preceding.

A special meeting may also be called, at any time, by a vote of the Grange at a regular meeting.

One hundred and fifty members shall constitute a quorum for the transaction of business, but a less number may adjourn from day to day.

ARTICLE V—Officers.—The officers of this Grange shall be the same in name and rank as in the National and Subordinate Granges. They shall be chosen once in two years, and shall serve until their successors are elected and installed. Vacancies by death, resignation or otherwise, must be filled by a special election at the next meeting thereafter. Officers so chosen shall serve during the unexpired term of offices so filled.

ARTICLE VI.—Duties of Officers.—Sec. 1. It shall be the duty of the Master to open and preside at all meetings of the Grange, and with the concurrence of the Executive Committee, or upon the application of fifty Masters of Subordinate Granges, to call special meetings of the Grange. He shall see that all orders and resolutions passed by the State Grange are duly executed; decide questions of constitutional law during the recess of the Grange; give general supervision to all matters of interest to the Order, and report in full all his official acts to each meeting of the Grange, with such recommendations for the good of the Order as may occur to him.

Sec. 2. It shall be the duty of the Overseer to assist the Master in preserving order, and in the absence of the Master, from death, resignation or otherwise, he shall perform all the duties of that office.

Sec. 3. The duty of the Lecturer shall be to visit, for the good of the Order, such portion of the State as the Master or the Grange may direct; he shall instruct the Deputies in the unwritten work of the Order, and shall report to the Master irregularities of Subordinate Granges with regard to the Ritual and unwritten work of the Order.

Sec. 4. It shall be the duty of the Steward to have charge of the inner gate.

Sec. 5. The Assistant Steward shall assist the Steward in the performance of his duties.

Sec. 6. It shall be the duty of the Chaplain to lead in the devotional services of the Grange.

Sec. 7. It shall be the duty of the Treasurer to audit, adjust and certify all accounts of the Grange, and all claims against it, previous to their being paid; to receive from the hands of the Secretary all moneys coming into his hands and all moneys remitted to him by Treasurers of Subordinate Granges, and from any other source, giving his receipt for the same.

He shall deposit all funds of the Grange in such bank or banks as may from time to time be selected by the Executive Committee, and shall pay them out only on the order of the Master, countersigned by the Secretary.

He shall remit promptly all dues to the National Grange, and obtain receipts therefor.

He shall render a full account of his office to the Grange at each meeting, and deliver to his successor all moneys, books and papers pertaining to his office.

He shall also send receipts for moneys received from Subordinate Granges to the Treasurers of the Subordinate Granges and duplicates to the Secretaries of Subordinate Granges, who shall forward such duplicate receipts to the Secretary of the State Grange in their quarterly reports.

Before entering on the duties of his office, he shall give bond in a sufficient amount to secure the moneys that may be placed in his hands, with securities to be approved by the Executive Committee. Said bond shall be held by the Master, in trust for the Grange.

Sec. 8. The Secretary shall keep an accurate record of all the proceedings of the Grange, and make out all necessary returns to the National Grange. He shall keep the accounts of the Subordinate Granges, and pay over monthly to the Treasurer all moneys coming into his hands, and take a receipt for the same. He shall also keep a complete register of the numbers and names of all Subordinate Granges, and the names and addresses of the Masters and Secretaries, and furnish the Treasurers and Secretaries of Subordinate Granges with the necessary blanks for making their reports.

He shall be present at all meetings of the Executive Committee, and act as their Secretary. He shall also give bond in such amount as the Executive Committee may determine, said bond to be adjusted, secured, approved and deposited with the Master, as in case of the Treasurer.

Sec. 9. It shall be the duty of the Gatekeeper to see that the gates are properly guarded.

Sec. 10. When a Chorister has been chosen, it shall be his duty to provide music and lead in singing, as indicated in the Ritual.

ARTICLE VII—*Elections*.—All elections shall be by ballot, and a majority vote shall elect.

ARTICLE VIII—*Committees*.—Sec. 1. All committees, unless otherwise ordered, shall consist of three members, and shall be appointed by the Master.

Sec. 2. At each meeting, a committee on Finance shall be appointed, whose duty it shall be to audit all accounts with the Grange quarterly, and report annually. To it shall be referred the reports of the Secretary, Treasurer and Deputies for examination.

Sec. 3. There shall be an Executive Committee, consisting of the Master of the State Grange, and four additional members elected by ballot, one of whom shall be elected for one year, one for two years, one for three years, and one for four years, and at each succeeding regular annual meeting of the State Grange, one member shall be elected to take the place of him whose term then expires.

The chairman of the Executive Committee shall be chosen by the committee each year. It shall be the duty of the Executive Committee to provide for the good of the Order in business matters, and they shall have authority to act in all matters, where action may be necessary, to carry out the resolves and directions of the State Grange, but in no other matters.

All action on the part of the Executive Committee shall be decided on only in a regular meeting of the committee, and composed of a majority of its members. All the acts of the Executive Committee shall be subject to the approval of the State Grange, to which they shall make a full and detailed report in writing not later than the third day of each meeting.

ARTICLE IX—*Quarterly Dues*.—The Secretary shall see that the Secretaries and Treasurers of Subordinate Granges make their quarterly reports promptly, and that the quarterly dues of Subordinate Granges are promptly paid, and in case the dues remain delinquent two quarters, the delinquent Grange shall be reported to the Master of the State Grange. On receiving such notice, it shall be

the duty of the Master to warn the delinquent Grange; and if the dues are not forwarded within thirty days it shall be the duty of the Master to advise the Master of the National Grange of such delinquency and recommend the revocation of the charter of the delinquent Grange. But any Grange whose charter has been thus revoked may petition the State Grange for re-instatement.

Secretaries of Subordinate Granges, in their reports to the Secretary of the State Grange, shall report: 1st, total number of members; 2d, amount due for quarterly dues; 3d, number and names of persons on whom degrees have been conferred since last report; 4th, amount due for degrees conferred since last report; 5th, number and names of members withdrawn to join other Granges; 6th, the number and names of members allowed to withdraw from the Order; 8th, the number and names of members dismissed from the Order; 9th, the amount paid to the Treasurer of the State Grange.

ARTICLE X—Withdrawal.—Any member of a Subordinate Grange who is in good standing and clear on the books of the Secretary, shall be entitled to a withdrawal card upon the payment of twenty-five cents, which card shall be valid six months. Persons bearing such cards may be admitted, within the period of six months from the date thereof, to membership in another Subordinate Grange without additional fees, but shall be subject to the same forms of petition, investigation and ballot as those first applying for membership, except that a majority vote elects or rejects them.

ARTICLE XI—Visiting Cards.—Visiting cards shall be granted to members in good standing and clear on the books of the Grange, upon application made in open Grange at any meeting, provided the dues shall be paid in advance for the term for which said visiting card shall be granted.

ARTICLE XII—Applications.—Sec. 1. Persons making applications for membership in our Order shall apply to the Subordinate Grange nearest to them, unless good and sufficient reasons exist for doing otherwise. In such case the Grange applied to shall not proceed to ballot upon the application until the consent of said nearest Grange shall be obtained.

Sec. 2. Any person applying for membership in a Grange and being rejected, shall not be eligible to membership in that or any other Grange for six months after such rejection.

ARTICLE XIII—Location.—Granges shall not be formed nearer than six miles to each other, except by the consent of all the Granges interested, and with the approval of the Master of the State Grange.

ARTICLE XIV—Consolidation.—Two or more Granges desiring to consolidate under one charter may do so by the unanimous consent and approval of the Master of the State Grange. In such cases, the surrendered charter, or charters, shall be transmitted to the Secretary of the State Grange, with the fact of such consolidation endorsed upon it, signed by the Masters of all the Granges interested, and by the Master of the State Grange.

ARTICLE XV—Deputies.—There shall be appointed by the Master of the State Grange one Deputy in each county, when a proper person can be found, whose duty it shall be to organize new Granges on application, and to install the officers at the time of organization.

Deputies shall receive for organizing new Granges within their counties six cents per mile for each mile necessarily traveled, and five dollars for each Grange organized, to be paid from the charter fee of the new Grange. For additional labor required by the Master of the State Grange, Deputies shall receive three dollars a day and six cents a mile each way, to be paid from the treasury of the State Grange. Deputies shall be appointed for one year, but shall be subject to removal for cause by the Master of State Grange.

ARTICLE XVI—Business Bureau.—One Chief of Bureau shall be elected by the State Grange. He shall have the power to appoint clerks and agents in his Bureau at such points as he may deem necessary, subject to the approval of the Master of the State Grange. He shall assign appropriate duties to such agents, and remove such agents and change such localities for cause, to be reported to the Master of the State Grange. He shall report quarterly to the Executive Committee all his operations, to be laid before the Grange at the annual meetings thereof, and shall have charge of such business operations in selling and purchasing as may be placed in his hands by the members of the Order. He shall be removable from office upon the motion of the Master by a four fifths vote of the Executive Committee for misfeasance or malfeasance in office only.

He shall have the general oversight of all the business connected with his Bureau; shall prepare and send out monthly to each Subordinate Grange in the State confidential price-lists, giving the best terms upon which Patrons can buy and sell in the different markets of the United States, with the expense of freight as far as practicable; and he shall act in concert with business agents of other State Granges. For his compensation, he shall receive a salary of two thousand dollars per annum, payable out of the treasury of the State Grange. Before entering upon the duties of his office, he shall give bond in such penalty and with such securities as may be prescribed and approved by the Executive Committee, conditioned for the faithful performance of the duties of his office. He shall hold his office for two years, and until his successor is duly elected and qualified, unless removed therefrom as above provided for. In case of the resignation, death or removal of the Chief of Bureau, his place shall be filled upon the nomination by the Master and the concurrence of four-fifths of the Executive Committee. The successor so appointed shall hold his office only until the next annual meeting of the State Grange.

The clerks and agents appointed by the Chief of Bureau shall give bonds for the faithful performance and discharge of their several duties, the amount of said bond and securities thereon to be fixed by the Executive Committee, and they shall be paid by a percentage upon the business transacted by the Bureau, such percentage in each case to be fixed by the Executive Committee. The said clerks and agents shall also pay into the treasury of the State Grange a tax upon the commissions thus received. Such tax shall be fixed in each case by the Executive Committee, and shall be in the aggregate enough to pay the salary and expenses of the Chief of Bureau.

The Chief of Bureau and all persons appointed by him in the business of his Bureau shall be members of the Order.

ARTICLE XVII—*Order*.—"Cushing's Manual," as recommended by the National Grange, shall be the authority for all points of order in this Grange.

ARTICLE XVIII—*Salaries*.—Sec. 1. The Master of this Grange shall receive for his services a salary of five hundred dollars per annum, and expenses.

Sec. 2. The Lecturer shall receive for his services three hundred dollars per annum, and 6 cents per mile travelled in the performance of his duty, to be paid quarterly out of the treasury of the State Grange.

Sec. 3. The Treasurer shall receive for his services a salary of six hundred dollars per annum and expenses, to be paid quarterly from the treasury of the State Grange.

Sec. 4. The Secretary shall receive for his services a salary of one thousand dollars per annum, to be paid quarterly from the treasury of the State Grange.

Sec. 5. The chairman of the Executive Committee shall receive a salary of three hundred dollars per annum, to be paid quarterly from the treasury of the State Grange; and each of the other members of the Executive Committee shall receive a salary of two hundred dollars, to be paid in like manner.

ARTICLE XIX—*Amendments*.—This Constitution may be amended or revised at any regular meeting of the State Grange by a vote of two-thirds of the members present.

LEWIS E. HARVIE,	} Committee.
W. M. AMBLER,	
HORACE P. LACY,	

Under the constitution thus adopted it became necessary to elect a general agent, to whom much of the mercantile interests of the members of the Order throughout the State was entrusted. The Grange then proceeded to fill that office, and the choice fell upon Mr. J. C. Featherston, of Campbell county. The headquarters of this officer will be in this city, with agents appointed throughout the State, with whom the office there will be in constant correspondence, and in close intercourse and communication.

The Grange then went into the election of members of the Executive Committee, with the following result: First year, L. R. Ragland, of Halifax county. Second year, A. M. Moore, of Charlotte.

county. Third year, R. V. Gaines, of Charlotte county. Fourth year, A. B. Lightner, of Augusta county.

[Mr. Lewis E. Harvie was nominated and voted for, but stated before the vote was taken that he could not serve.]

This and other matters, reports of special committees, &c., occupied the time of the Grange until 8 o'clock, at which time it took a recess for an hour.

EVENING SESSION.

The subjects of fertilizers and banking occupied the attention of the Grange throughout the entire evening, and the hour for adjournment arrived before any conclusion was reached or definite action taken on either subject.

Adjourned to 10 A. M., 16th January.

FOURTH DAY.

The Committee on Insurance reported that they had not had sufficient time to mature a plan for the establishment of a bureau of insurance, but at their suggestion it was referred to a special committee with orders to report a plan to the Executive Committee at an early day.

The question of an organ was, on motion, referred to the proper authority for it to mature some plan for the establishment of a paper devoted to the objects of the Order.

Major R. V. Gaines offered a lengthy preamble and resolutions on the financial distress of the agricultural interests, which were briefly discussed, and for want of time to consider them, were laid on the table.

A GRANGE BANK.

A resolution was passed recommending to the subordinate Granges throughout the State the necessity of considering the subject of the establishment of a central bank in the city of Richmond under the auspices of the State Grange of Virginia as affording a means of relief to the financial necessities of the members of the Order, and to instruct their several Masters to report to the next meeting of the State Grange the amount of stock which has been secured in the several subordinate Granges.

A committee of five was appointed to memorialize the Legislature on the subject of immigration.

There was, as usual at the close of all deliberative bodies, a large number of resolutions, motions, &c., offered. Most of them were of no interest to the general reader, and are, therefore, omitted from this report. These, with personal explanations, the consideration and passing of sundry bills for expenses, &c., occupied the attention of the Grange until 3 o'clock, when it adjourned *sine die*.

The Grange Insurance Company, at Muscatine, Iowa, is carrying risks to the amount of \$200,000.

COMPOSTS.

A short time ago a friend requested us to give him some directions on *composts*, and in answering his request it occurred to us that the subject was worth laying before our readers, whose notions on it must be quite crude. If the practice has anywhere obtained of making composts cheaply and profitably, we would be greatly obliged if some correspondent conversant with the details would furnish them for publication. Before the war, Edgecomb county, N. C., had a great reputation for success in composts, but we have not had time to hunt up the report of it. Here is a copy of the letter we wrote :

TO THOMAS EDMUNDS, ESQ., Charlotte :

DEAR SIR: I have your message by Mr. B. asking me to send you specific directions for making a compost. I would do it with great pleasure if it were possible to give specific directions in the absence of specific data. Looking into my books for assistance I find Morton's *Cyclopedia of Agriculture* devotes eight double-column folio pages to the subject; and Stockhardt—*Chemical Field Lectures*—devotes fourteen pages octavo to it. Hence it will be seen that it is impossible for us to give here more than a few general ideas on composts until your wants are more specifically stated. It may illustrate the scope of a general inquiry to state that Morton says a writer in the *Gardener's Chronicle* describes the preparation of twenty different composts for garden purposes. And the author of *British Husbandry*, tells us, vol. I, p. 433, "There are numberless receipts scattered throughout the writings of various theorists, in which the quantity and quality of each ingredient in these various mixtures are as accurately stated as if they were the medical prescriptions of physicians. But these are mere quackeries, which do not merit the attention of practical men."

A compost is a "manure in which the effects of the *aggregate mass* is greater than the total effect of the *several parts* would be, if applied singly." The substances that go to make composts are *earthy refuse*, such as ashes of wood, building rubbish, clay, mud from ditches, lime, plaster, &c. ; *vegetable refuse*, such as straw, cornstalks, leaves, weeds, saw dust, spent tan bark, &c. ; *animal refuse*, such as dead cows or horses, offal from slaughtered animals, &c. ; and *liquid refuse*, such as house and kitchen slops, soapsuds, &c. How shall any of these be made into a compost? Not by a haphazard mixture; for certain of them antagonize certain others, and by their influence on each other diminish to a serious extent the positive value of the

whole. Thus the addition of quick lime to stable manure would expel ammonia; and the incorporation with it of animal offal would produce the same effect by causing a too active fermentation. But the addition of an inert earth, which would check, if not wholly hinder fermentation, may preserve the volatile parts and enable them at the same time to unite with or modify the nature and action of other parts. If, for instance, we do not wish to use stable or farm pen manure until sometime after it has been made; to keep it, perhaps, as a top-dressing for wheat or hay grounds, we can preserve it by a covering of earth; and if we have a successive accumulation of such manure, as from the stable, then we can preserve it by mixing periodically layers of manure and layers of earth. This has been sometimes our own, and a doubtful, practice in the winter, when the season gave leisure to haul the dirt—always from a short distance—the purpose being to break up the mass so that, applied in the fall and winter, it would not interfere with gathering the hay by the horse rake the next mowing season.

Some composts enable us to use substances that contain valuable ingredients, which otherwise we would lose. Weeds and leaves which sometimes may be conveniently collected in large quantity may be rotted in compost, especially if quick lime be added, by sprinkling, over the successive layers; and in this way the soil may receive lime, potash, and a small portion of phosphate of lime, and at the same time have its mechanical condition improved. Artificial fertilizers may sometimes be advantageously composted with a modicum of dry clay or leached ashes, and be distributed through a drill with less trouble and more effect than in any other way.

But such processes are, as a rule, very expensive. For generally the quantity of the main ingredients is considerable; and to make the mass fully operative it must be watered from time to time with manure water or some liquid to promote fermentation, and be turned completely several times. Then the amount to be applied to each acre is very considerable, and the value of team work involved may take away all positive, and more probably, all comparative profit. Assuming "says Stockhardt, p. 264," that a cart load of earth (say 15 cwt.), is watered five or six times during a summer with good urine, perhaps we may be able to incorporate with the former an equal weight of the latter, 15 cwt.; how large will be the amount of nitrogen which the earth thereby receives, after this has become again as dry as at first? Answer: at most $\frac{2}{3}$ per cent.; thus it will be only

1-18th as rich in nitrogen as Peruvian guano. A cart load of this strong compost will consequently not be able to exert as much stimulating effect as 1 cwt. of guano “* * * *” A very rich compost which a Saxon farmer had prepared from excrement of fowls and pigeons, cesspool manure with gypsum, wood ashes and coal ashes, with frequent moistenings with drainings from a dung-heap, showed only a proportion of 11 per cent. of nitrogen (with 4-5ths per cent. of phosphate of lime and 18 per cent. of organic matter), so that 12 to 15 cwt., or in regard to soluble *nitrogen*, double the quantity of it, gave a manuring equivalent to 1 cwt. of Peruvian guano.*

Among us 10 to 12 four-horse wagon loads of farm-pen or stable manure—60 bushels to the load—is considered a fair dressing for land in fair heart under ordinary crops: much more, of course, for vegetables or heavy tobacco. But the addition of the same amount of earth will not make the manure doubly as rich; and though it may help the quality by saving waste of ammonia, quicken certain inert substances in the general mass, and aid the effect of the whole by a more uniform distribution, yet whether all this will balance the cost of the extra labor is a question which the judicious farmer must decide for himself.

Here is the result in Scotland, where labor is cheaper, and skill both in head and hand greater than with us. *Stephen's Farmers' Guide* vol. 1 p. 472, “speaking from experience” tells us that though most favorably situated, with the command of abundant materials, vegetable and mineral, collected at a season of comparative leisure, put together in the best manner, and turned at the proper times with the greatest care, forty or fifty cart loads—tons—of compost and did produce as much effect as twelve cart loads” (about one-fourth) “of good muck”—farm manure. “The manual labor,” he says, he “managed easily enough, but the horse labor was overpowering,” and, “he concludes,” to incur such an expense for the problematical good to be derived from composts above guano or bone-dust, which are easily carried, *i. e.* handled, is more than the most sanguine farmer is warranted in bestowing.”

With such statements from high authority, the farmer among us who wishes to make composts on any large scale, should consider very carefully the relations of land, labor and production, as well as the

*These extracts may throw some light on the subject—the failure of the manure from earth closets—on which our Henrico friend M. wrote a short communication in the last number of the *Planter*. Probably the quantity applied was too small, the bulk and not the quantity being the guide.

constituents he may wish to add, and the degree of amendment his labor will produce. He would do well to confine himself to accurate experiments on a small scale. These would be cheap and instructive; and some of them might be very valuable.

We hear occasionally of another kind of compost, perhaps it would be more proper to say compound, that is contemplated by some of our farmers, mainly those who have been cheated in the kind or quality of certain commercial fertilizers, or who think the best are too dear at the price. Their wish is to purchase in a concentrated form the various ingredients they think their land needs, and compound them for themselves. It cannot be done. The honest men who make fertilizers have found out the cheapest sources of these ingredients, and use them without addition or adulteration. Blood, flesh, fish, dried to a proper degree, phosphates in some of their combinations as bone—fossil or mineral—and sulphuric acid are what they use; some of them adding to their mixtures more or less of potash in the shape of *kainit* or German salts, of more or less potash strength. A man who buys in quantities just sufficient for his own use, sulphate of ammonia or nitrate of soda, (the richest practical ammonia substances), and Charleston rock and sulphuric acid, and *kainit*, and makes his own fertilizer, will pay more because he buys at retail, is just as apt to be cheated through his own ignorance or the design of dealers, and will be apt to have an inferior fertilizer from want of proper appliances, or from ignorance of the formula he should employ. Or let such a man, if he wants to come down to essences, inquire of the druggists, who alone can tell him the prices of ammonia, phosphoric acid and *caustic* potash, and if he can afford to buy them, as he cannot, let him try to work them up with lime and earth. We think he will find that he might as well attempt to save money by buying pure alcohol and diluting it down to the “proof” of good whiskey. The cost of concentrating such things to an essence is greater than the cost of transporting the substances from which the manufacturer distills them.

The man who thinks otherwise had better invest at first in a small experiment and note the comparative result.

F. G. RUFFIN.

[For the Southern Planter and Farmer.]

BAD EFFECTS OF FERTILIZERS.

The majority of the farmers in the State of Virginia are spending large amounts of money in the purchase of manipulated guanos, to be used upon their wheat, corn and grass crops, and in doing this

they are surely erecting the stumbling block upon which many must in the end fall and be crushed. They are sowing to failure, and a failure they will surely reap. "Let us reason together" about the good and bad effects produced by the continued use of the much praised guanos. Do they do the land any real good? You will say that by an application of from 250 to 500 pounds per acre you will be enabled to raise 20 to 30 bushels of wheat per acre. Admit it. Is your land in as good condition after the crop has been taken off as it was before the application? I think it exceedingly doubtful. It is an admitted fact that when a man is suffering, if you will give him a little chloroform he will be relieved from all pain in a few moments, but when the effects of the chloroform has worn off, the man suffers more than he would have had it not been administered to him. So (I contend) it is with land that has been fertilized from year to year, it will not produce *anything, not even "hen grass,"* without a goodly application of some of the fertilizers, and perhaps it will take the very best guano to make it do that. I think if any one doubts my statement, all he has to do to be convinced that I am on the right track, is to visit the tobacco raising regions of our State, where he will find that from the continued use of some one or the other kinds of guanos, the farmers have been enabled to raise small crops of tobacco yearly; but ask the same farmers what their lands will produce without the guanos, and they reply *nothing*. Now the guano acts upon the land in such a way that it forces their land to put forth all its strength in producing that single crop, and of course when it is made the land is not as strong as it was, thus stimulating land with manipulated guanos has the same effect upon the land that is produced upon man by stimulating him, viz: weakens him instead of strengthening him. I will admit that the application of fertilizers to a poor field will pay if you can get a stand of grass and will then drop the stimulant and bend all your energies to the improvement of the land by the use of *plaster and clover alone*. When I say alone I mean without the aid of artificial fertilizers, but sprinkle on a *little* stable manure, for it will do it (the land) good. Most farmers in their eagerness to get some *pet standard* of fertilizer seem to have forgotten that their forefathers raised better crops than are raised now, and they used clover and plaster to keep up the fertility of their land. Let us go back to the theory and practice of farming "in ye olden times," and determine to use clover, plaster and what manure we can make on our farms, and escape the doom that certainly awaits us, viz: Bankruptcy. Oh Virginians! look about you and see if you are not in the wrong track, when you persist in using this fertilizer, which, in my opinion, has proven the greatest curse to Virginia that can befall a people—and then flee from the coming destruction. You can make Virginia a blooming garden by your energies. Then let us attempt it, and it will be done. Farmers choose ye this day which you will do, kill your land

by physic, or make it *grow fat* by the use of plaster, grass and manure?
 "KEASTAR."

Culpeper Co., Va.

NOTE BY THE EDITOR.—With perfect deference to the opinions of our esteemed correspondent, he will pardon us if we make a few observations. He condemns wholly, as ruinous to the planter, the use of concentrated, or as they are usually styled, "commercial manures." Without inquiry into the special merits of any of them, we will consider some of the facts in connection with their use. It is a fact that the consumption of these manures in Europe, where land is high, farm stock abundant, and population dense, is enormous. Their use began thirty years ago under the advice of Baron Liebig, and it has increased to such an extent, from year to year, that now it is no uncommon thing for a single factory to produce 100,000 tons per annum. It is a fact that, by the judicious use of these manures in conjunction with what the farm produces, and good cultivation. Great Britain has increased her average of wheat per acre from 14 to 28½ bushels. It is a fact that, by their use, there is produced in France as much as 30 tons of beets per acre, to say nothing of other crops. It is a fact that it is found to pay the planter in Mauritius for him to give £16, or \$80 in gold, per ton at the factory in England for such a manure to be applied to his sugar-cane some 2,000 miles away. To come nearer home, it is a fact that, despite the utter destruction of farm arrangements in the cotton States by the war, including its labor system, her cotton crop, through the use of these manures, is as large now as it was before the war. We might continue to multiply instances to show that the estimate of our correspondent of these aids to agriculture is not generally entertained throughout the agricultural world.

A man may die of apoplexy from eating too much of the most wholesome food. It is not just to blame the food for the abuse of the laws governing his body. So, if a man depends solely upon concentrated manures, and neglects what is equally necessary—the proper cultivation of his land—and the use of such domestic manure as he ought to have at hand, or to restore to his land, by clover or peas, the vegetable matter taken from it by his grain or other market crops—he should not visit his failure to continue to farm with profit wholly upon the fertilizer he applied, it may be, to a barren soil, but consider that something is due also to his poor management. These manures cannot supply men with brains, and we know of no calling which requires a better exercise of this part of a man than the business of farming. These manures, indeed, are intended not only as labor-saving machines, but used in conjunction with manures of the farm, a combination is secured that provides very fully the elements lost to the land by the crops sold off. While we do not, any more than our correspondent, decri the value of clover and plaster, we believe our lands require more. The good crops of our fathers, we expect, had their foundation quite as much in the constant taking up of new land, and the abandonment of the old, as in anything else.

When a fair degree of skill is used, it is said that a lot of poultry may be marketed with double the profit that would be derived from raising the same value of pork. Fowls digest grain more thoroughly than swine do; no portion capable of being assimilated is wasted. If it will pay to produce poultry for the market, it will pay the farmer to raise it for use upon his own table.

[For the Southern Planter and Farmer.]

ESSAY ON FERTILIZERS.

The following Essay on the question "What kind of Fertilizer is most suitable for our lands, if it be advisable to use any," was prepared and read under resolution of the Cuckoo Grange, Louisa county, Va.:

This question directly and deeply concerns us all, because, as a rule, we all have an *excess of poor land*, too poor for cultivation with any reasonable hope of profit, without a free use of fertilizers; and perhaps it might with truth be said, that the best of our farmers are tilling, year after year, large areas of land, in expensive hoed crops, which, with good seasons and under the most favorable circumstances, barely pay the cost of cultivation; and yet, perchance, we might afford to do this for an indefinite length of time, if we could be certain of always having fruitful seasons and no accidents to the crop; but, unfortunately, the business of farming, like any other calling, is *subject to very many accidents*, and while it is true that the risks which the farmer takes in the year's round of cropping is not so great as that of some other enterprises which men embark in, as, for example, that of merchandize, it is also true that his *margin for profit is smaller*, and for that reason he cannot afford, as a prudent business man, to take the risks of the many accidents to which any given crop is liable, *on any land that will not, under favorable circumstances, a good deal more than pay the cost of its production.*

A neglect to make the necessary estimates of the probable amount and cost of production, is one of the great sources of failure and loss to our farmers. It is not because *farming well followed* is not, in the long run, as good a business as merchandize, for on the contrary, the statistics show that more men succeed at the former than at the latter profession. Nor is it because that, as a general rule, our farmers are wanting in industry and enterprise, nor because of the high price or inferior quality of negro labor, but the great and deadly bane of our system, that which poisons and saps the whole and *makes success impossible* is our inveterate and persistent habit of cropping on land, which, in an *average of seasons fails, and will ever fail, down to the end of time, to pay a profit on the outlay.* We blindly ignore the plain fact that *free labor is more costly than slave labor, that it costs a good deal more to cultivate an acre of ground now than it did in former times, and that the bill of farm expenses, always heavy, has to be paid invariably in money.* In ante-bellum days the farmer, as a general thing, paid nothing for his labor, and he did not trouble himself much to know whether his farm netted him any thing or not. The raising of negroes was an important item. They were one of the staple products of the farm, and it only much concerned him to devise the ways and means of making the two ends meet, which he generally managed to do, whether he made *much or little*, for it was, at last, with him only a matter of *home productions and home consumption*, and while, at the end of each year, like

Mr. Triptolimus Yellowby, he very often had to confess, as his sad experience, that "*the carls and the cart avers make it all, and the carls and the cart avers eat it all,*" he yet had the satisfaction of knowing that with a regular annual increase of negroes, he was yearly increasing in wealth and prosperity.

But since the war *times have changed*, and it becomes us to *change with them*, so far as to adapt our system of farming to the circumstances which surround us, and the following are some of the changes which seem obviously and imperatively demanded by our circumstances:

1. We must practice a greater economy in the item of hired labor, and cut down our farm expenses generally.

2. Cultivate much less land in *hoed crops*, have it richer and work it better.

3. Grow more grass and sow more hay, that we may thereby do with much less grain in the feeding of farm stock.

4. Raise all the stock needed for the farm, such as cattle, horses, hogs, &c., and thus save all the money usually expended in the purchase of these.

But what is to become of all of our waste lands, and how are our arable lands to be so enriched as to make them a great deal more productive? Shall we make large applications of artificial fertilizers, or will it pay in average of seasons to use them at all? These are puzzling questions, very hard indeed to answer, and in attempting any solution of them, I confess the task to me is very like that which the universalist preacher undertook, when he attempted to show that the word *everlasting* in the Bible, does not mean *everlasting*. Well it chanced one day as he was taking his text, an old sailor, who was, no doubt, a very great sinner, staggered in and he heard him read, "*and these shall go away into everlasting punishment,*" and then the preacher began to comment on the word *everlasting*, which he said he was prepared to prove from the Bible did not mean *everlasting* at all, but at this point the sailor stopped him and he said to the preacher, "*well my good friend I want you to make that out if you can, for if you can't, I jist tell you I'm a gone sucker,*" and so I say to my brother farmers of Louisa, if we can't devise some more economical way of enriching our lands and of making better crops of corn, wheat and tobacco, and at less money expense than heretofore, we are *gone farmers*—gone beyond redemption, for it is a stern reality with the most of us, that for the past ten years, we have been losing money by farming, nearly every year, and yet, strange to say, we never seem to lose our courage and hope, but, Macawber like, we are always looking for some good luck to "*turn up*" for us somewhere, which, somehow, never does *turn up*, and each New Year finds us as buoyant and hopeful as ever, with our sails all gaily trimmed, and our flag flying, and so we drift along right bravely and merrily down and down the stream to—ruin.

[CONCLUDED IN OUR NEXT.]

Cuckoo.

P. B. PENDLETON,

[For the Southern Planter and Farmer.]

MANURING WITH CLOVER.

In the November number of the *Planter and Farmer*, is an article upon this subject, which might mislead farmers into the idea that clover alone, as a manure, is sufficient, not only to support the fertility of the soil, but will actually increase it, and this to an indefinite length of time. Mr. Hill Carter's experience is quoted, in which he says, that "If plaster acts well, I can, with clover, make land rich enough for any crop." That depends, perhaps, very much upon the character of the soil. Other instances are quoted, where the fertility of land has been kept up and increased for 50 or 60 years. I can point out farms on the Shenandoah river, that have been under cultivation for one hundred years with scarcely a stalk of clover growing, or ever having grown upon them, and yet they are apparently as fertile to-day as ever. I have in my mind to-day a small farm of upland, which, for 40 years perhaps, was farmed by renters, and which never had a stalk of clover upon it, unless the seed was carried upon it accidentally, and yet the soil sustained its fertility in a remarkable degree without an external aid, except an insignificant supply of barn-yard manure.

I do not wish to be understood as undervaluing the use of clover as a manure. I think, on the other hand, that farmers do not properly appreciate the value of the red clover as a manure, and I would urge them to extend their efforts to improve their lands by the growth of this valuable grass, but what I wish to say is, that clover alone is not sufficient to maintain the fertility of soils generally. The instances I have referred to, are cases where the soil has large storehouses of the elements of fertility in almost inexhaustible supply. Probably, that is the case with the instances quoted by A. Land may become exhausted upon the surface by superficial cultivation, while the subsoil may contain large supplies of fertilizing material in a soluble condition, but beyond the reach of ordinary crops. Clover is sown upon it, and if you can get it to stand, it sends its long roots down into the subsoil, imbibing these fertilizing elements, and bringing them up to the surface, within reach of the roots of wheat, oats, barley, &c. But the time is coming, sooner or later, when this supply in the subsoil must fail, the length of time depending upon the supply contained in the soil. Some soils contain very large quantities of phosphates and potash in a soluble condition, sufficiently so to keep up the fertility for many years, while others contain but a limited supply, or a sufficiency in quantity, perhaps, but in an insoluble condition. Most of our soils are in the latter condition, containing a fair supply of the elements of plant growth, but not sufficiently soluble to maintain their fertility under constant cultivation, without the addition of artificial means, or by suffering the land to rest for a length of time until nature restores the loss by a gradual dissolution of phosphatic and potash rocks.

Doubtless, "the cheapest and best fertilizer" we possess, is barn-

yard manure, but unfortunately the supply is inadequate to the demand. Can we depend upon clover alone? As well might we expect to sustain the fertility of the land by using plaster or lime alone. Barn-yard manure contains all the elements that a plant needs, so does clover; but the clover derives its support from the soil, and cannot return but a portion of what it derives, therefore, as a large portion is carried off by the following crop, Prof. Johnston, in his Agricultural Chemistry, in answer to the question "Will green manuring alone prevent land from becoming exhausted," says, "If we plough in only what the land produces and carry off occasional crops of corn, the time will ultimately come when any soil thus treated will cease to yield remunerative crops." The rains wash away a considerable portion of this fertilizing matter, and the crops carry it off, and the supply in the subsoil must ultimately fail, unless the supply comes from foreign agencies, such as artificial manures. It is true that poor land may be improved to the clover bearing point by the use of commercial manures, but it is not true that by the use of clover alone the land will continue to improve without the occasional use of other manurial agencies.

D. W. PRESCOTT.

Edinburg, Va.

[For the Southern Planter and Farmer.]

PAPERS OF THE VA. STATE AGRICULTURAL SOCIETY.

To this Essay, by Mr. Bowman, a medal was awarded by the Committee on Essays.

REPORT OF AN EXPERIMENT ON UNDERDRAINING, *made by A. M. Bowman, near Waynesboro, Augusta County, Virginia., in the Spring of 1874.*

In making this report it is necessary to say that the ground drained was an old meadow of 30 acres, abounding in numerous springs and swamps, producing mainly what is commonly known as "sour grass" and weeds; and over one-half of which had not been in cultivation within the recollection of the oldest inhabitants of the vicinity.

This meadow is an oblong square and is almost equally divided by a small creek running from one end to the other, with about six inches fall to the hundred yards. The ground on each side of the creek is very little inclined towards the creek, and in many places the inclination is from the creek at the rate of two inches to the hundred yards. The entire meadow was interspersed with swamps and small springs, so that a large portion of it was covered with water all the year round.

The first thing that was done towards draining it was the grading of the creek, or in other words, cutting out the bottom of it to a uniform depth of three feet, so as to enable us to get sufficient fall and depth to the side drains, which were to run into the creek at an angle of 45 degrees. The cost of grading the creek was 37½ cents

per rod. The creek being graded, the next thing in order was the draining proper.

The ditches were cut from the creek out, leaving the bottom, at the mouth, about three inches above the level of water in the creek, and then grading so as to give a fall of from four to six inches to the hundred yards.

Wherever the ground was of such nature as to allow a ditch of uniform three feet depth, the drains were placed about forty feet apart; when less than three foot ditches were cut they were not placed more than twenty-five to thirty feet apart. The material used for draining was one and a half inch tile, except where drains came in contact with a spring, when two inch tiles were used. The cost of the one and a half inch tile was \$18 per thousand feet, and that of the two inch tile \$23 per thousand feet. Immediately after the tiles were laid, they were covered with the same earth that was taken out of the ditches.

Cost of cutting ditches, laying tile and filling in ditches, 32 cents per rod.

It is necessary to state that the drains were so managed, as, in all cases, to run immediately over the springs, and in laying tile over springs, they were in all cases covered with loose stones to the depth of five or six inches before the earth was thrown in. This is done to enable the water to pass more freely into the tile, and is only necessary in case of springs. The average cost of draining the entire meadow of thirty acres, was \$20 per acre, by which was reclaimed a tract of land which was not worth over \$25 per acre, and which is worth \$100 per acre since. The meadow was plowed up and planted in corn, and the crop is estimated at from sixty to ninety bushels per acre.

It is necessary to state that a few drains were laid with stone, costing about the same as tile, and are not near as efficient, being more liable to be filled up by the bottom of the drain rising up in them.

Respectfully submitted,

A. M. BOWMAN.

STATE OF VIRGINIA,

Augusta County, to-wit:

Personally appeared before me A. M. Bowman, A. J. Brown and John Thacher of the county aforesaid, and made oath that the above statements are correct.

October 16th, 1874.

JOHNATHAN KOINER, J. P.

[For the Southern Planter and Farmer.]

TO PATRONS OF HUSBANDRY.

Having seen several letters from members of the Patrons of Husbandry in your columns, I shall endeavor to write a short piece, giving my views upon the subject. There has been combination, and

always will be of other societies, and why not the farmers have combination of their own, excluding all but their own profession? There is one thing, Brother Patron, that has been, and will be, with the farmers, and that is, the profession claims to be farmers upon half-way ground, and when they get in, they claim the lion's share, as they have always done.

Ours is a farmer's institute, and as farmers we claim the right to "paddle our own canoe." Therefore do not let them beat us down, nor carry off the honors of our cause.

Stand by the farmer and defend the cause, and the day is not far distant when the world will say that the farmers are able and competent to defend their own rights. Some well informed Patron please answer. Has a Master the right to act as Master and Secretary?

Respectfully,

A. GRANGER.

[For the Southern Planter and Farmer.]

SOME REMARKS ON THE APPLE TREE.

The time, distance, and most important, the kinds of this fruit to plant, are the main things to be considered by those rearing orchards.

The fall is decidedly the best time to plant, and this may be continued during the mild weather to the 1st of January, and sometimes later. 32 or 33 feet apart is as near as the apple tree should be planted. When it is designed to cultivate for a number of years, between the trees the distance should be 40 feet.

In considering the kinds to plant we refer principally to East Virginia, where our observations have chiefly been made. And in this respect, we think our forefathers, in the main, have been wiser than the children. Many, and perhaps a large majority of the modern apples, particularly those introduced from northern latitudes, will not succeed in our latitude. We think it may safely be said that about one-half of the trees set out in our modern apple orchards are worthless. The old varieties have naturally enough been neglected, through the influence of puffing new varieties, and the exaggerated statements of tree agents sent through the country.

For Eastern Virginia early apples have been found most profitable for marketing. Of the early apples then, we would plant the old-fashioned "June," (sometimes called May) "Early Harvest," "Striped July," and "Red Astrachan," and some of the "Early Ripe," which is a very fine, promising apple, coming in just after the Harvest. We have seen the apple, but cannot speak with certainty of its productiveness.

For the fall, we would plant principally "Fall Cheese," and for cider the "Virginia Crab." The Cathead, one of the largest fall apples, is not a full bearer. "Maiden's Blush," the prettiest of apples, if, perhaps, we except the "Strawberry Apple," is a shy bearer. The "Smokehouse" is a promising fall apple, though we are not posted about its productiveness.

For winter, we would advise three-fourths "Winesap." Then comes the "Virginia Greening," "Carthouse" (or Romanite), the "Limber Twig" and perhaps "Cannon Pearmain," which we know to be a profuse bearer in Piedmont Virginia, and a great keeper. The "Limber Twig" is a great bearer and keeper, but an inferior apple. The "Shockley," much cultivated farther South, deserves a trial in Virginia. It is said to be a full bearer, excellent keeper, but not of first quality. The "Big Hill" (or Pryor) is an excellent winter apple, but poor bearer.

The soil best suited for the apple is a deep, good soil, with clay subsoil, chocolate soil the best. It is said that this fruit succeeds best when transplanted from a poor to a good soil, and we believe this is true, for this reason: In a light, thin soil, the roots seek the surface, with little tap root, and many fibrous roots, which a stiff nursery soil does not permit to grow well. In removing the young tree from this thin soil, scarcely a fibre is broken. We were much struck with these facts recently in procuring some trees from Via & Sons, on the Westham Road, near this city. His nursery is on light land, and we never saw prettier trees for transplanting, and in fact never saw trees with such excellent fibrous roots, scarcely one broken. We may be permitted to add, without intending disparagement to other excellent nurseries in the same vicinity, and without any personal interest in the matter, except to see merit rewarded, that Mr. Via is perhaps the oldest nurseryman in Virginia, and has had great experience, particularly in rearing trees for Eastern Virginia. His variety, of apples particularly, is very good, and as a nurseryman his reliability is unquestioned.

THOMAS POLLARD.

Henrico.

P. S.—Mr. Via recommends highly "Carter's Seedling" (raised by the late Curtis Carter from Winesap seeds) and Via's seedling—both, I think, winter apples, also Haglo Crab.

E. B. A. CLUB,

OF NORFOLK COUNTY.

At a meeting of the E. B. A. Club, of Norfolk county, held December 3d at the residence of Capt. C. P. Poindexter, W. H. C. Lovitt, President—inspecting the farm being the first business in order, which showed signs of improvements upon last year's visit—we retired to hear from the committee appointed at last meeting upon "labor." The chairman, Mr. Leighton, arose and read as follows:

Mr. President and Gentlemen,—The subject of labor, which was discussed at our last meeting, and is so replete with interest, was to be further considered at this meeting.

We regard the resolution requiring a certificate from the last employer as inexpedient under existing circumstances.

Our organization is too limited to influence the action of the general employers in this region. Some five years since the Horticultural and Pomological Society passed a resolution establishing the rates for picking strawberries. Some of the members adhered a while to the resolution, while others who voted for it found that their interest called for a step across the resolution, which was ultimately disregarded by all. I had the privilege of losing forty dollars by adhering to it, which served as a reminder to this policy, and made up my mind that until there was a radical change in human nature, it was safest to leave all points of the labor question untrammelled. At the risk of being regarded as an alarmist, I predict that each successive generation of the colored population will become less reliable, and our agricultural interest should be shaped accordingly.

In corroboration of this position, I will cite two instances of negroes transferred to localities of supposed good influences.

(1). In the year 1854, while on a visit to St. Johns, N. B., a merchant called me to a window to see a negro who was passing by riding on two trucks sawed from a huge log, and drawn by one ox. He remarked that he belonged to a remnant of a settlement of negroes made at the close of the revolutionary war, taken by the British fleet from Virginia, and that the Home Government decided to give them a large tract of well-timbered land in that vicinity for their benefit. He said that they did well at first, but had gradually degenerated in numbers and habits until they were a perfect curse to the community.

(2). Some eighteen or twenty years ago a squad of about twenty-five negroes were sent from the interior of Virginia by their master, a Mr. Burnett, to Hardin county, Ohio, who provided them with farms which were contiguous. They did well at first, but subsequently disagreements set in and they commenced selling out and going into towns, and this day there are only two known to remain in the county. It is from these and similar facts that have come under my observation that I have made my deduction. The present generation is working under the healthful influences of its former condition. And now that the intoxication occasioned by their freedom has subsided, we find their labor the most economical, and the best adapted to our wants for plain farm work of any we can procure.

As it becomes less efficient, I know of no better remedy than to divide and sub-divide our large farms, and instill into the rising generation the importance of putting their hand to the plow with a nerve and determination that shall preclude all looking back.

Frederick Wilson, Esq., offered the following resolution which was unanimously adopted:

Resolved, By this Club, that we heartily approve of the resolutions adopted by the farmers' council held at Petersburg, at its third annual meeting to the effect that a committee be appointed to memorialize the Legislature upon the necessity of enacting a law to better protect the farming interest by making it a penal offence to hire a

laborer already under contract. At the end of the discussion the following preamble and resolution were adopted:

Whereas, no opportunity should be overlooked for encouraging the consumption of our early vegetables and fruits at the north; and whereas, the cheapness to them and increased returns to us can be best reached by a more direct communication between the producers and consumer; and whereas, there are many cities and large towns on the route commencing at Albany and ending at Buffalo, N. Y., now supplied from second, third or fourth hands with our products, therefore, be it

Resolved, That our President be requested to open correspondence with N. L. McCready, Esq., President of the Old Dominion Steamship Company, urging the importance of putting on a tri-weekly line of steamers from New York to Albany, in connection with the Norfolk boats, to receive the freight from the docks upon the arrival of the boats from Norfolk, and proceed without delay to Albany for distribution to points beyond.

The subject of "drainage" was selected for discussion at our next meeting, which takes place at Mr. F. Wilson's, on the 29th of December, 1874.

On motion, the meeting adjourned.

FRED'K M. HALSTEAD,
Secretary Eastern Branch Ag'l Club,
Norfolk Co., Va.

SHIPPING POULTRY AND GAME.

In answer to numerous inquiries as to the best mode of preparing, dressing and packing poultry and game for shipment to the New York market, we desire, in this general way, to communicate the following instructions; and from twenty years' experience in the produce business in this city, we think we can do so understandingly. Possessing, as we do, ample facilities and a location unsurpassed for handling all kinds of produce, we offer our services with great confidence in being able to serve our correspondents satisfactorily:

First: Poultry of all kinds should be well fattened, on yellow corn if possible, but should not be fed for at least twenty-four hours before killing, as a crop filled with food sours and turns black, injuring the appearance and sale very materially.

Second: Experience has shown that the best mode of killing is, to cut the head off with as little of the neck bone as possible; then, as soon as scalded and picked, cut off as much of the protruding bone as will enable you to draw the skin down over the end of it, and tie tightly with a cord.

Third: For scalding poultry, the water should be as near boiling as possible, without actually boiling. The advantage in this is, the outer skin becomes cooked or set, and so does not peel off with the feathers and look ragged or skinny as they say here. The fowl,

being held by the legs should be immersed and lifted up and down into and out the water three or four times, then, continuing to hold in the same way, with the other pluck off the feathers without a moment's delay after taking out of the water. If skillfully handled in this way, the feathers and pin feathers may all be removed without breaking the skin. Wherever the skin is broken, exposure of the flesh to the air injures its appearance, and consequently its sale.

Fourth: The intestines should not be taken out at all for this market.

Fifth: After the feathers are removed, dip into water just at the boiling point, for about two seconds, then immediately into cold water for about five minutes; then hang up till thoroughly dry, and the animal heat is entirely out. Care should be taken not to let it freeze before packing.

Sixth: Turkeys and chickens dry picked sell to a limited extent in the market very well, but none except the choicest kind should be dressed in that way. When they are, they should be picked immediately after killing and while yet warm, and not put into water either before or after picking, but hung up until the animal heat is entirely out before packing for shipment.

Seventh: Ducks and geese should always be scalded and steamed by covering with a blanket for a short time before picking—in other respects handle as turkeys and chickens.

Eighth: In packing, use clean dry straw; if this cannot be had, wheat or oat straw will answer, but be sure that it is free from rust and dust. Place a layer of straw at the bottom, then alternate layers of poultry and straw, taking care to stow or pack snugly, back or belly upwards—never on the side—filling vacancies with straw, until the package is full so that the cover will draw down very snugly upon the outside, to prevent shifting about in transit to market.

Ninth: Wild game of every description should not be dressed, either picked or skinned. Quail, partridge, grouse and woodcock should be wrapped in paper to keep the plumage smooth and straight, and packed snugly into boxes or barrels head down. Venison: The intestines should be taken out clean, and the carcass hung up, washed thoroughly with cold water, and left hanging till dry, with the skin left on. Pigeons should be picked and packed in ice.

Tenth: Boxes that will hold 150 or 200 lbs., are the best packages for poultry or game; clean, new barrels will do very well—old flour and sugar barrels should not be used.

Eleventh: Live poultry can be sent to market in roomy coops to good advantage between June 1st and November 1st, but not later.

Notice to shippers: In regulating your shipments, we suggest that they be made frequently and in small lots all through the season, as in that way you secure an average market price and run but little risk in the extreme fluctuations in our market. Send your large fat turkeys for Thanksgiving and New Year; large fat geese and chickens for Christmas—and ship so as to have your consignment get here at least three days before the holidays; they had better arrive ten days

after than only the day before. Always send by mail to the consignee, and invoice of each shipment.—*Strong's Poultry and Game Circular.*

BEST SIZE FOR A HORSE.

Considering the number of persons who own horses, how long they have been in use and how much use is made of them, it is really astonishing how little real horse sense there is among our people at large. The want of any real knowledge of the horse is the source of many erroneous opinions, which are doing and have done serious injury to those who entertain them, and which is to be more regretted to the horse.

We wish to point out one of these erroneous opinions this morning, but it is one of the most injurious of the lot. It is the very common preference for large horses. The extreme of this error does not prevail in Tennessee as yet, and it may be that a kind climate will forever protect us from the horse elephants just now growing into such high favor in some of the northern states. Nevertheless, the preference for large horses prevails too widely.

For all the purposes for which horses are used, blood, form, and mettle are of far greater importance than size. That the thoroughbred horse possesses all of these qualities more uniformly, and to a greater degree than any other breed, does not admit of debate. This superior speed, endurance and courage is an admitted fact. We need, then, to only refer to the ascertained size of the stoutest racers of the world to establish the truth for which we contend—that the blood, shape and mettle of the thoroughbred furnishes the very best horse for the saddle or harness.

The following table includes only a dozen of the great turf kings of the olden times, and we have named only those that were noted alike for their stoutness and their speed :

NAME.	HEIGHT.		AGE.
	Hands.	Inches.	
Godolphin Arolin.....	15	1	29
Darby.....	15	0	—
Flying Childers.....	15	0	26
Fearnought.....	15	4	—
Cade.....	15	0	22
Gimcrack.....	14	1	27
Blaze.....	15	0	23
Bay Bolton.....	15	0	31
Matchem.....	15	0	32
Waxy.....	15	1	28
Babraham.....	16	0	20
Eclipse.....	15	0	26

These were famous horses in their own day, and still more famous in their descendants. They were full size, too, of their kind.

Coming down to later times, we find the famous horses gradually but very slowly increasing in size until the average reaches 15:2, but rarely ever going up to 16 hands.

On the turf, the small horse—small, at least, in comparison with

the Conestogas, is without a rival. The big horses of racing blood are almost invariably left floundering in the rear in all tests of speed or endurance.

Turning from the turf to the battle field, and our position is, if possible, even more triumphantly sustained. No broader or better field could be desired for testing horses' virtues, than the late American war offered. And it is a fact which not the most loyal of loyalists can gainsay, that the horses that carried the southern cavalymen were incomparably superior to those that were brought from the north to meet them. Almost invariably the northern horses were large framed, heavy bodied, coarse limbed and clumsy. The southern horses, in comparison, were small, light, clean made, active and enduring. The differences are characteristic of the breeds—the thoroughbreds being small and raw-boned, the scrubs large and coarse.

For long and constant use, over all sorts of ground, the small horse is beyond all comparison superior to the large, clumsy horse. Again this is true in harness, in all cases, except for slow heavy draught. The light, active, upheaded, high stepping horse is better for carriage or buggy, while for heavy work, the mule is the thing.

The practical outcome is, that if a horse has the blood, shape and constitution, his size is a matter of indifference. The mare, in fact, has more to do with the size of the foal than the horse. So if you are afraid of small horses, do not breed shallow bellied mares.

We repeat, that in speaking of large horses, we refer to the great Conestogas and Percherons now being imported into the northern States.

We wish some of our many well posted readers would collate the sizes and ages of the more recent kings of the turf, as well in harness as under the saddle. We are of opinion that the trotters will average a fraction higher and heavier than the gallopers.—*Colman's Rural World*.

DRYING BOOTS.

The season of rain and sleet is near at hand. Men who are obliged to be in the field, or anywhere much out of doors, will come home at night with boots well soaked. In the morning there is pulling and kicking sufficient to exhaust the patience of the owner, before he can get them on. If dry, the boots are hard and uncomfortable; if still wet, the case is as disagreeable. Some genius, however, suggests the following plan to get rid of the trouble:

When the boots are taken off fill them quite full with dry oats. This grain has a great fondness for damp, and will rapidly absorb the least vestige of it from the wet leather. As it quickly and completely takes up the moisture, it swells and fills the boot with a tightly fitting last, keeping its form good, and drying the leather without hardening it. In the morning, shake out the oats, and hang

them in a bag near the fire to dry, ready for the next wet night; draw on the boots and go happily and comfortably about the day's work.

This is an oat "corner" to which no man can object.

[For the Southern Planter and Farmer.]

CULTIVATION OF SHIPPING TOBACCO FROM THE PLANT-BED TO THE WAREHOUSE.

[We very rarely have as good an article, that is, appropriate to the subject it treats of, as the one below, so plain, condensed and complete.—Ed.]

The following is offered as the result of fifty years' experience in the cultivation of this staple:

THE PLANT-BED.

The writer since the war has used only raw beds. Some time between the middle of February and middle of March a spot is selected in the woods with a south or south-east exposure, exhibiting a post oak growth, and thin black soil with tenacious clay subsoil. This spot is cleaned thoroughly and hoed up with grubbing hoes—care being taken not to bring up any of the subsoil to the surface. It is chopped over two or three times with the grubbing hoes until the tilth is very fine, and all the roots are raked out. The bed is then laid off both ways to secure uniform distribution of the guanos, which is sown at the rate of 25 pounds to the 100 square yards, and chopped in with hilling hoes.*

The bed is then raked and again laid off both ways for the seed, which is sown at the rate of a tablespoonful-and-a-half to the 100 square yards. The seed is put in by whipping the bed or dragging a brush over it. Fresh stable manure derived from the chaff of the wheat so as to be free from seeds is then applied in a liberal dressing. The bed is then covered not very thickly with brush. Late beds do not require re-sowing.

As soon as the plants are large enough to require pushing, I apply a mixture of plaster and guano or hen-house manure. If the fly appears I use kerosine oil mixed with corn meal and plaster sowed on liberally. These dressings are repeated whenever the plants seem to require them. In sixty days from the time of sowing I have had plants large enough to set out.

PREPARATION OF THE LAND.

I plant only old land and on a different lot every year so as gradually to improve the whole farm. I select a clover sod which is ploughed with a three-horse plough in the fall always. It is aimed to throw one or two inches of the subsoil to the surface soil at this time with the view of gradually deepening the soil. The land remains undisturbed until I am ready to haul out the farm-yard manure in March.

*Or 1210 lbs. to the acre. We have known the old-time Peruvian guano applied at the rate of 1800 lbs., with a splendid result. But there is none of that guano now.—Ed.

April and part of May, which is spread as carried out. I aim to put about 25 loads of manure to the acre. After the manure is spread, I run Smith's three-horse seven-tooth cultivator over the land to pulverize the soil and to intermix the manure thoroughly with it. I then cross the land thus cultivated with harrows; it is then laid off with a scoop in rows $3\frac{1}{2}$ feet by 3 feet. I apply in the drills at least 200 lbs. to the acre of the best commercial fertilizer attainable; then I apply broadcast just before the land is listed one bushel of plaster and two of salt to the acre. The salt protects from the cutworm, and prevents the firing of the tobacco. I list with two-horse ploughs, throwing all the manure into the drill. In planting season when the ground is not too wet, single mules drag rakes between the rows to pulverize—a roller is then passed on the top of the lists covering two beds and striking the distances for the plants with pegs. Thus three boys do the work of many of the most efficient men and a very great economy of labour is secured.

CULTIVATION.

As soon as the grass begins to show a little, I side with the single plough, bar next to the plant. - As soon as the plant will bear the dirt it is thrown back with the same plough, and the middle ploughed out. As the tobacco is sided the hoes follow on trimming from the tobacco such grass as the ploughs fail to destroy. When the grass begins to show again, I sometimes use the cultivator, if that is insufficient, I always use the mouldboard plough. I generally plough once again with the mouldboard plough and trim with the hoes whenever it appears necessary. Not much time is lost by hoe work. The crop is almost entirely made by the team.

TOPPING.

Topping commences as soon as the plant is of sufficient size, and before it begins to button. My plan is different from that of any other planter I ever met in this, that I *top before priming* to avoid splitting the top or having curled leaves on the top, which very often occurs if the reverse plan is followed.* My object in *priming* is to take off the plant-bed leaves that have gotten their growth at the time of topping.

CUTTING AND HOUSING.

The tobacco is cut as soon as ripe. The cutting is repeated as the crop ripens, and is generally completed by the 10th of October. After that time the improvement does not pay for the risk of standing longer in this locality. The cutting is continued from the time the dew is off in the morning till about 1 o'clock P. M. As soon as the tobacco can be handled it is packed and covered to prevent burning by the sun. All hands then go to the tobacco house except enough to attend to the team. The tobacco is then carried directly

*Will our correspondent please be a little more definite at this point. How do you in this case select the bottom leaf, by which you are guided to the top leaf without counting? and what is meant by "splitting the top or having curled leaves?"—ED.

into the house as it is hung. Large tobacco being put eight plants to the stick, small tobacco ten to twelve to the stick. Before the cutting begins the next day the tobacco is all regulated. The distance on the tier pole depends upon the size of the tobacco; if it is very large, the distance is ten inches; if small, the distance is less according to size.

CURING.

The tobacco remains hung in the house for several days according to the weather. If the weather is warm two or three days are sufficient to make it yellow enough for the fires. I then commence with very small fires, which are kept up at a moderate heat until the leaf begins to cure; the heat is then increased until the curing of the leaf is complete. The fires are then put out, and no firing is then done until a warm season comes. I then go and dry the tobacco out by means of fires.

STRIPPING.

As soon as the curing is complete I proceed in November and December to bulk for stripping. I bulk by only lapping the tails—putting from 2000 to 3000 pounds in a bulk.

I select the hands of best judgment for sorting. In sorting I make four classes—long, good short, indifferent short, and lugs.

I have the bundles tied neatly—four leaves to the long tobacco—six to the good short—eight to the indifferent—and fourteen or fifteen to the lugs. The tiers are required to be particular in having the bundles of uniform length.

I weigh and bulk down every night what has been stripped during the day, handling about four bundles at a time in bulking.

When the bulks are completed I put a small weight upon them. When the stripping is completed, all the tobacco is carried to one house, straightened and rebulked, two bundles at a time.

After bulking is completed I commence prizing, unless I conclude to put the tobacco in shipping order, which I have not done since the war. In prizing I have two or three hogsheads under the prize at the same time* so as to have the separate grades from the same bulk selected by an experienced hand and put in separate hogsheads.

It is designed to put 1400 or 1500 pounds of soft tobacco to the hogshead. Hogsheads of lugs may contain as much as 1600 to 1800 pounds. The chief aim of the planter should be to secure excellence of quality. The means to attain this end are thorough cultivation, bountiful manuring, and skillful handling.

JOHN S. NICHOLAS, SR.

Seven Islands, Buckingham county, Va.

*How do you manage that if you have only one or two prizes?—ED.

The Saratoga agreement by which the railroads were to combine against "granger" influence may be considered dead.

[For the Southern Planter and Farmer.]

THE COW PEA AS A FERTILIZER.

After some observation and many experiments, I am forced to the conclusion that the cow pea, as a fertilizer, is cheaper than any of the commercial fertilizers that have yet been introduced. It is to the South what clover is to the Middle and Northern States. We have in the pea a perfect manure for all crops grown in the South, at trifling cost, and that is what our down-trodden, poverty-stricken country (made so by exclusive cotton culture and high priced fertilizers, bought on time at exorbitant prices and a high rate of interest,) most needs. Quite a number of remedies have been suggested for the renovation of our exhausted lands and wasted fortunes, but in my opinion no remedy yet suggested meets the case so well, at so small an outlay of dollars and cents, (which is a very scarce article in Dixie, as the pea. Will grow on the poorest land without manure, and in this latitude two crops can be grown in a season, for soiling purposes, which is equal to 250 lbs. of the best commercial fertilizer. Cost of sowing and turning pea vines will not exceed \$3.50, which would be a saving to the farmer of \$5.00 per acre. Another advantage claimed for this process of fertilizing, is, that the labor of sowing and turning can be done after crops are laid by, when hands and teams are idle. My custom is to sow stubble land from the 15th to the 30th of July (or later if I can't get it done by that time) and turn under before frost, which prepares the land for any crop, without further outlay for fertilizers. When it is desirable to follow wheat with oats or oats with wheat, a heavy harrow run over the land is all that is necessary when the pea vines have been turned under. In localities where wheat and other small grain crops are the staple productions, the pea is indispensable to successful cropping. Sowing peas broadcast, after wheat or oats, would keep down noxious weeds and plants and at the same time store away food for the following crop. Try it. I cut down an old orchard, land naturally poor and sandy; with clay and sandy subsoil. Had been in cultivation and orchard 25 years. Sowed in oats, fallowed with cotton, sowed with oats again; when planting cotton the last time, made 600 lbs. seed cotton per acre, made a good crop of oats; after cutting oats, sowed peas broadcast with 125 lbs. Peruvian Guano; best pea crop I ever saw; don't know what it made per acre, as I fed off with hogs. Last year sowed broadcast 15 bushels cotton seed per acre, on same lot, in February, drilled 200 lbs. Stono Guano 1st April, made 1,731 lbs. seed cotton per acre; think it was cut off 15 or 20 per cent. by drouth. Have sowed other plats of land that have been reclaimed in the same way; am making 1,000 lbs. seed cotton and 20 to 25 bushels corn per acre on lands that a few years ago would not make one-fourth that amount without manure. This has been done principally by sowing and turning pea vines. The man who has not an eye to the improvement of his land does not deserve the name of farmer. The improvement of

our lands is the first step towards material prosperity; this effected, intelligence, refinement and power, will follow in the wake. Then, fellow farmers, let one and all of us address ourselves to the task of building up the waste places, beautifying our homes and make this beautiful land, on which nature has showered her richest blessings, the pride and glory of those who come after us.

Unionville, S. C.

S. C. FARMER.

[For the Southern Planter and Farmer.]

VIRGINIA AGRICULTURAL MECHANICAL COLLEGE.

REPORT OF THE PROFESSOR OF AGRICULTURE, SUBMITTED TO THE
BOARD OF VISITORS, JAN. 6, 1875.

VA. AG. & MECH'L COLLEGE, Dec. 9. 1874.

Hon. Board of Visitors.—It is my duty to present a brief report of the operations of the Department of Agriculture. A large class of our best students have studied the course of Agriculture the first half-session, and have made very gratifying progress. I am happy to report that the operations of the farm for the current year have been successful. All our crops were planted in due season, well cultivated, and yielded good returns. The hay and oats were somewhat shortened by an unusual drought which prevailed here in May and June. We got, however, fair yields of each, which were saved in good condition. The cattle grazed were sold for the top price of the season, and to the leading dealer of the country, and the profit realized was within a fraction of 100 per cent. Besides, a considerable amount was realized from the rental of pasturage. All the farm stock are going into the winter in the best condition. The wheat crop yielded above 20 bushels per acre, of superb quality. The varieties were Fultz and White Blue Stem. The land being corn land, we used 200 lbs. per acre of the following fertilizers on different portions of the field, viz: the Wheat Fertilizer of the Southern Fertilizing Co., Richmond, Patapsco Guano and Turner's Excelsior, Baltimore. Our experiments show that these manures more than doubled the yield of wheat. Experiments made to test their relative value were vitiated by the previous treatment of the land, not known to me at the time the plats were selected. Experiments made for the purpose, showed that of the kinds of wheat named, and for our soil one bushel per acre, is the best quantity of seed. One half-bushel yielded less than one bushel; one and a half bushels, less than either, and least of all from two bushels; so that we sowed the present crop at the rate of one bushel per acre, and I have never seen the crop present a handsomer appearance at this season.

I have most carefully prepared upwards of twenty experimental plats to test the relative value of different kinds of fertilizers and different modes of culture for wheat, as well as to determine the proper quantity of each fertilizer to use per acre, which experiments

will be reported when complete. In order to thresh these plats separately, it is very necessary that we should have a small horse power and thresher on the farm, and I ask for the appropriation of \$400 to purchase it.

Our corn crop received all the farm-yard manure. It yielded above sixty bushels per acre, and is all housed in good condition. There were not above thirty bushels of nubbins in the entire field. We have secured also, for winter use, a very fine crop of roots.

Experimental culture is very expensive, if undertaken on a large scale. The mere measuring of the plats and separate harvesting, threshing, cleaning and weighing of the yields, occupies an amount of time that few who have not tried it conceive of. The work, to be worth anything, must be done in the most thorough and complete manner, and, therefore, takes up the time of the best hands. I fear, therefore, we shall not be able to enlarge or diversify our operations until some progress has been made in the proper enclosure and equipment of the farm.

The working details of students have performed their duties with entire cheerfulness, and, I think, increased efficiency, while those who have been hired to work in their own time have performed a large portion of the work of the farm in the most satisfactory manner. As at present managed, I have no question of the value of the system of details, as far as the benefit of the students is concerned. Our object is to dignify and enlighten labor, and there can be no question of the propriety of requiring every student to work in his turn. I have, myself, often joined the working details with a view to encouraging a proper spirit. It is certain, I think, that no student here feels himself, or any other, in any manner degraded by work. That any of our best people have ever felt thus about work, is a calumny so often repeated by our enemies, that some of us began to believe it of ourselves. It is not true, and never was true.

Very respectfully,

Signed

M. G. ELLZEY,
Prof. of Agriculture.

TERRIBLE SLAUGHTER OF SHEEP BY DOGS.—We learn from a friend that on the night of the 18th instant that the sheep-flock of Mr. E. W. Crockett, of the Cove, was visited by more worthless dogs, and twenty-two fine sheep killed. A few days before they were killed, Mr. Crockett refused \$10 per head for them. We have always advocated a dog-tax for the protection of the sheep, which is very profitable to the country when properly managed; but as there is no protective law it is almost useless to call attention to the subject. The people can straighten the thing by sending no man to the Legislature who is opposed to a heavy dog-tax. By doing this the farmer will be enabled to raise sheep. Otherwise he cannot.—*Wytheville Dispatch.*

THE CHICKAHOMINY LOW-GROUNDS.

HOW THEY MAY BE RECLAIMED AND MADE PRODUCTIVE.

Many plans have been suggested for cleaning out and deepening the bed of the Chickahominy, which has become greatly filled up by fallen trees, gathering every year obstructions at different places, thereby preventing the free flow of the water in the channel of the river. I tried a plan to get rid of some of those obstructions which, I am happy to report, proved a success, at a very small outlay of money; and which, if carried out, will reclaim perfectly one of the most valuable and productive large bodies of land in the State. Its near proximity to Richmond, and its perfect adaptation to grass-growing, must, or ought to, make those lands a mine of wealth to their owners in supplying this section of the country and the country south of this with a superior article of hay superseding that now brought from the North and distant sections of this State.

The value of these thousands and thousands of acres of lands now not only idle, but requiring *taxes* to be paid on them annually, and breeding, year after year, sickness, insects and vermin to destroy surrounding families and crops, would, in a period of years, if attended to at proper periods of the year, at

AT A VERY SMALL OUTLAY,

as before stated, be both immense in amount, and astonishing to the oldest and wisest landowner in this country. The mode of treatment I suggest is as follows: In the summer when the water is at its lowest, and the leaves and other dead vegetation, fallen logs, etc., (all of which form the obstructions referred to), are all dry, let each owner of lands on the river (by concert with his neighbor, if necessary) set fire to the combustible material on his lowlands and burn out clean everything that will burn. One day will make a clean sweep of all the obstructions referred to, and besides will kill out every bit of the young growth of bushes, briars weeds and grass, and leave these lands, though in timber growth, in splendid condition for seeding among the trees herds, orchard and Peruvian grasses for pastures and for hay; for this timbered alluvial land will, if not too densely shaded, produce more and better crops than the open lands. Simply sow the grass-seed on the hard, unbroken surface among the large trees; in the spring of the year, after frosts, it will come up.

And now for the obstructions of logs, &c., in the channel. When the water is at its lowest, as before stated, cut them up into short lengths of from five to six feet, and leave them there for the water,

WHEN THE FLOODS COME,

to carry them out of and away from the channel; for it is true that when the water is rising that in the centre of the channel is higher than on the sides, and hence it flows outward from the centre and carries with it everything that floats, and leaves it generally a good distance from the channel on the flats that are overflowed. When the water begins to fall in a stream, the water is lowest in the centre,

and hence the water is drawn to the same from the overflow lands, leaving the mass of debris high and dry on the land, some distance from the river, where the next annual burning, in dry mid-summer or early fall, is sure to consume the whole of it. Thus, in two or three years, with a little common sense and a judicious use of the axe and fire, the work of millions of men may be saved and thousands and thousands of the most valuable acres of land may be cleared up and reclaimed at a cost so small as not to be really felt.

I have given these facts for the general good, knowing them to be facts. They are applicable to all low-lands with running streams through them.—*Richmond Whig*.

BURN AND CUT.

[For the Southern Planter and Farmer.]

A SMALL EFFORT AT HIGH FARMING.

You ask me to repeat the details of an effort towards "high farming," made by me many years ago. A full statement of the facts was published in the *Planter* of 1866 as I think, and I regret that you cannot recover the number that contained it. Of course you, and your readers, will make all proper allowances for any discrepancy or lack of accuracy due to the number of years (and such years!) that have fallen upon us since the experiment was made.

In the spring of 1856 I selected a piece of land so poor as to suggest, by analogy, the "*experimentum in corpore vili*" of the speculative surgeon. It was divested of its natural growth, sassafras, persimmon, and the usual varieties of briars—and ploughed to an average depth of seven inches. The harrow and roller was then passed over it persistently until the tilth was perfect. A few loads of farm-yard manure were put on the poorer portions, but the main reliance was in the application of guano—250 of Peruvian, and 250 of Columbia—the whitest and best Phosphatic Guano I ever saw. The land was planted, mainly, in tobacco, but the crop was so poor that I kept no account of it, though I must have made enough to pay for the guano.

In October, I was prevented, by illness, from superintending the sowing of the wheat, and when my manager asked permission to apply more guano (as he expressed it, "just to *peerten* up the land," I reluctantly consented to his putting on 100 pounds of Peruvian, to the acre. When I got out, I found (from the number of empty bags) that he had put on at least 200 pounds! and fully expected that the wheat, long before harvest, would lodge—and such, doubtless, would have been the result, if the spring had been wet. Fortunately, however, as regarded this experiment, the spring months of 1857 were exceptionally dry, and the season in every way favorable to the growth and maturity of the wheat. The variety was that which had as many aliases as an old rogue, but oftener styled "Little Red" and "Early Purple Straw." The average height of the straw in this particular crop was about four feet. The quantity of land (as found

by accurate survey after the crop of wheat had been harvested) was 37 acres, and the yield was a full average of 33 bushels to the acre, or 1221 in the aggregate. I may mention that I was induced to measure the yield of 7 acres obviously superior to the average of the field, and the result was 280 bushels, an average of 40 to the acre.

I sold the wheat from the last in question about \$1.50 nett, making say \$49.50 per acre. The Peruvian guano cost about \$55 per ton, the Phosphatic about \$30. I remember that after deducting the cost of the guano, and allowing a very flattering discount for the natural production of the land my estimate was that I cleared about \$30 per acre. Of course in *those* days we took no account of the *labor*, which we fondly, but foolishly thought, belonged to us!

In the fall of 1857 this land was again sown with wheat—80 pounds of guano to the acre, applied with the drill. The result was an average of 20 bushels to the acre. Grass-seeds were sown with this crop but failed to take well. The land, however, shows that it has not entirely forgotten the extraordinary treatment it received in 1857, to this day it produces better than the contiguous lands, and has never thrown up a tithe of the pests (in the shape of sassafras, &c.) which formerly disfigured it.

In offering this statement to my brother-farmers, I hope it might, in some small measure, go to prove that a reduction of area by no means involves, as a necessity, a reduction of crops. Deep tillage is of more importance than broad acres, and I trust my brethren will hearken to this *dictum* none the less kindly and considerately because the writer, with some shame, and a good deal of sadness has, in parting, to echo the peasant poet—

“May you better reckon the rede,
Than ever did the adviser.”

RAISE MORE CLOVER AND GRASS.—As it is in order now for farmers to lay their plans for the next crop, I would suggest a change in our practice. We are confining ourselves too much to the production of corn, wheat, cotton and tobacco, thereby greatly impoverishing our farms, and often producing more of those staples than the markets demand, thus forcing prices below the actual cost of production. Wheat, at present prices, is barely paying the cost of production, and from present indications, the crop of the present year is likely to sell at actual loss to the producer. Let us learn from the past, and diversify our crops so as to avoid in future the possibility of such an event. We should sow a greater breadth of land in clover and grass; grow a greater quantity of fruits and vegetables; bring our farms up to a higher degree of fertility, and enrich rather than exhaust them. We might learn a useful lesson from the recent action of the pig iron manufacturers, and, like them, resolve to work on half time, rather than be guilty of the folly of over production. Then let us resolve to so diversify our crops as to realize a fair remuneration for their production.—ARLINGTON, in *Rural World*.

[For the Southern Planter and Farmer.]

THE BEST COTTON SEED TO PLANT.

The importance of planting the best seed cannot be overestimated. For five years I have been engaged in improving my cotton seed, and I have at last gotten them to my liking. I have discarded the old idea that the seed of the first picking should be put into the manure pit. I save the seeds of the lower and middle crops and throw out the top. The consequence is, that my seed will mature all of two weeks earlier than any I know of. Besides, the staple is vastly superior, and is more prolific than any with which I am acquainted. This cotton was called, in Alabama, years ago, the "sugar loaf," because it grows in that shape and is desirable on that account, as it can be planted closer and plowed more easily. My crop this year averaged within a fraction of a bale of five hundred pounds to the acre, notwithstanding the killing out in spring, bad stand, and the destructive drought and hot weather in July and August. Had the season been as good the two years previous the results would have been far better. Of course the crop was well manured and the grass was not allowed to grow. The little fertilizer I bought was the English Stonewall, sold by Flannagan, Abill & Co., of Savannah, and better bought manure cannot be had, but I raise the fertilizer I like better in my stable and barn-yard. With regard to these cotton seed, I have never sold a pound of them, but have given some to my less favored neighbors, and exchanged with others, but that operation has become burthensome, and besides, after years of pains taking to perfect these seed, I see no reason why I should not get some return. I have not now, more than one hundred bushels that I could spare. I have never advertised, nor shall I, but if my Virginia and North Carolina friends would like to avail themselves of these seeds, if they will order them *immediately* I will send them.

The charge will be two dollars and fifty cents per bushel of 32 lbs. sack included and delivered at the railroad station at Waynesboro, Ga. The money can be sent by express *prepaid* or Post Office or money order. My seed I have named Wyatt's Early Prolific. The name imports just what they are, nothing more nothing less.

Professor Fendleton, of Georgia University, and the chemist for the State, has given me a recipe for making a cheap and reliable manure, which I intend to try this year, and I give it to other farmers:

Eight tons of rich earth; one-ton Peruvian guano; four tons dissolved bone.

Lets try it; it will not cost over eighteen dollars per ton.

S. WYATT,
Waynesboro, Ga.

Patrons in Kansas are saving 25 per cent. on their corn, by purchasing it through the agency of the Iowa State Grange.

The Grange Insurance Company, at Muscatine, Iowa, is carrying risks to the amount of \$200,000.

AMELIA COUNTY, Dec. 15th, 1874.

COL. F. G. RUFFIN:

Dear Sir: At the request of Dr. Cheatham, I furnish you with the results of heavy manuring on plot of four acres of land. In the year 1868, I took up four acres of land of moderate fertility. Applied to about half of the plot stable and farm-pen manure, pretty liberally. The plot thoroughly prepared for tobacco, and 200 lbs. Gilham's tobacco fertilizer applied in the drill to the acre before planting, and 200 lbs. more of same fertilizer applied to the acre broadcast when the tobacco was hilled and coming in top. Yield of tobacco 500 lbs. to the acre (exceedingly dry season).

After taking off crop of tobacco, then prepared the plot for wheat and applied 200 lbs. to the acre of a preparation or mixture made by Col. Gilham, I think of equal parts of German potash and plaster. (You can consult Mr. John Ott. He may find Col. Gilham's recipe for making the preparation referred to above. Prepared 1868.) [After diligent inquiry, Mr. Ott cannot find the recipe,—ED.]

The wheat crop of 1869 following the tobacco was very fine, making forty bushels per acre of good wheat. The clover that followed the wheat was the finest I have ever seen, measuring from 3 to 5 feet high. Next crop of tobacco land prepared, and 300 lbs. "Wilson's Tobacco Grower" applied broadcast per acre—the four acres making 5,000 lbs. of first-class shipping tobacco. The wheat crop following made 110 bushels, or 27½ bushels per acre—fine crop of clover following the wheat. The land appears to be in high state of fertility at present.

Yours truly,

F. MORGAN.

MEXICAN OR EL PASO ONIONS.

We had another visit this morning from Mr. B. G. Andrews, of Atascosa Post-office Bexar county, who is giving special attention to the raising of the above onions. He first obtained the seed from Mexico, or El Paso, we forget which, and then preserved them from degenerating by proper cultivation, and allowing no other sort of onions to grow on the place. The soil he cultivates is a black sandy loam. He breaks the ground with a turn-plow, and then sub-soils with a bull-tongue. He then beds up the ground in the usual way, as for cotton or vegetables, with the rows about two feet apart. The ground should be as clean as possible, and the soil finely pulverized; by the use of rakes, rollers, etc. He then plants the onions in two ways.

About the first of September, or any time during that month, he sets out the onions in the rows, from about the size of a hen's egg to that of a medium turnip. He sets them close together in the rows. In about six weeks, or two months, they will have grown and sprouted sufficiently to separate the sets and transplant them. Each onion will have divided into several sets, from a half dozen to twenty. These are carefully separated and set out in the rows, leaving about a foot or fifteen inches between them. In good ground and with proper cultivation, these will have grown into a large onion and be ready for market by April or May, according to the time they have

been planted or transplanted, and also according to the season, where there is no irrigation.

Another plan, carried on at the same time as the foregoing, is to sow the seed in the same sort of rows, and about the same time, in September. This is done by making a small drill furrow in the top of the bed, sowing the seed in it and tramping or pressing the earth down over them. By the spring time these will have produced onions of small size, which carefully preserved, are to be set out in the following September, and then managed as in the first plan described.

In this country manure is scarcely ever needed, the soil being sufficient of itself. But when used the stable or barn yard manure is not put upon the ground in its raw state. It is either burned upon the ground, and the ashes spread upon the rows, or, what we think is better, it is put in a tank, and kept wet, and, at the proper time, it is poured upon the ground in a liquid state.

This onion, as those who have never seen it may know, grows to a very large size, the average ones weighing one pound, and some of them reaching as large in circumference as a breakfast plate. It is perfectly white—almost milk white—with delicate green shading, and is of a mild delicious taste. No other onion in the state can compare with it. There are many bastard onions of this species, where the onions have been set out in the fall, and have sprung up into numerous sets, which have not been separated and transplanted, and the result is a mass of flat three sided and other misshapen things, instead of large, round smooth onions.

All this western country can grow these onions in the greatest abundance, and they will prove very profitable to the producer.—*San Antonio Express*.

A PERFECT HOME.—The most perfect home I ever saw was a little house into the sweet incense of whose fires went no costly things. A thousand dollars served as a year's living of father, mother and three children. But the mother was a creator of a home; her relations with her children were the most beautiful I have ever seen; even the dull and commonplace man was lifted up and enabled to do good work by the atmosphere which this woman created; every inmate of her house involuntarily looked into her face for the key note of the day, and it always rang clear. From the rose bud to the clover leaf, which, in spite of her hard housework she always found time to put by our plates at breakfast, down to the story she had on hand to be read in the evening, there was no intermission of her influence. She has always been and always will be my ideal of a mother, wife and a home maker. If to her quick brain, loving heart and exquisite face, had been added the appliances of wealth and the enlargement of wider culture, hers would have been absolutely the ideal home. As it was, it was the best I have ever seen.

[For the Southern Planter and Farmer.]

AGRICULTURAL DEPARTMENT UNIVERSITY OF VA.

LETTER FROM PROFESSOR PAGE, SUGGESTING EXPERIMENTS TO TEST
THE VALUE OF CERTAIN CLAYS IN DESTROYING INSECTS.

I take the liberty of calling your attention to a paragraph which occurs in Professor William R. Roger's "Report of the Geological Reconnoissance of the State of Virginia," made in January, 1836. On page 31 of the Report, while speaking of the Green Sand, (silicate of potash and iron), sulphate of iron, sulphur and other matters associated with the miocene marl beds in the miocene tertiary formation of Tidewater Virginia, he says: "In some parts of the Miocene district, there occur beds of clay more or less sandy, and usually of a dark color, containing Sulphate of Iron and Sulphur in a minute, but still appreciable quantity. Such matter, there is reason to believe, could not prove beneficial to the soil. The former has been thought positively detrimental to vegetation; and certainly when applied in considerable quantity, this is its effect. What agency it might exert in a more diluted state, and mingled with other matter, we are without the means of determining. * * * Yet in some well authenticated cases, the action of these copperas and sulphur clays has been found strikingly beneficial.

In these instances, however, it would seem that much, if not all, the benefit was produced by the effectual protection which even minute quantities of these substances—especially the sulphur—afford against the attack of insects. In a cotton field in which all the alternate rows were lightly sprinkled with earth of this description, the plants so treated grew up vigorous and healthy, while the others became sickly and were nearly devoured by insects.

Much careful observation is required to determine the kind and mode of influence which these substances exert; and it would be premature, in our present ignorance of the matter, to assert any convictions on the subject. The presence of the former of these ingredients (sulphate of iron) if not recognized by the copperas flavor, will be readily discovered by steeping the earth in water—decanting the clear liquid—boiling it down to a small volume, and then adding tincture of galls or prussiate of potash. A black or brown color with the former, or a blue one with the latter, would indicate its presence. The experiment, however, should be made in a glass or china vessel. The sulphur becomes manifest to the smell when the clay is heated; and even at ordinary temperatures its peculiar odor may often be perceived."

In view of the increased depredations of insects injurious to vegetation (generally) during the past year, and the increasing cultivation of cotton in Tide-water and South-side sections of the State where an abundance of the clay containing these substances exists, it seems to me to be proper to call the attention of the farmers in those sections to this subject, that they may decide the matter by the test of observation and experiment. I will, therefore, ask that you

will call their attention to the subject, by a short paragraph in your valuable journal.

Pardon me for troubling you at such length, and believe me, very respectfully yours, &c.,

JNO. R. PAGE.

DOGS VS. SHEEP.—Something ought to be done by those having the power to protect the sheep interests of the country from the depredations and ravages of worthless curs. All intelligent men who have given serious thought and attention to the subject must admit that there is no enterprise in which the farmer can engage that is more fruitful of profitable results than the business of sheep-raising. In this section it could be made a source of wealth to all those who might be disposed to engage in the business. As it is, however, it is one of the most perplexing and uncertain enterprises in which the farmer can invest his capital and his labor.

There ought to be a remedy for this evil, but until some plan is devised and adopted by which the country can be rid of the thousand and one miserable dogs which now infest it the evil will still remain in full force. We know of a number of our best farmers who have abandoned their flocks altogether on account of the fact that there is no protection afforded their folds under the laws of the country. There are others who will be forced to pursue the same course unless there is a change for the better. On the other hand, we know of many who would gladly embark largely in the business if they could be assured that an effective dog-law would be enforced for their protection.

We throw out these hints for those who think. That the prevalence of so many good-for-nothing dogs is a crime against the best interests of the country, and all classes therein, is a proposition which cannot successfully be controverted. We know that a remedy can be found for the evil, if those in authority would summon to their aid sufficient moral courage to meet the issue.—*Exchange.*

MOFFETT'S CREEK, VA., Jan. 25th, 1875.

At a regular meeting of Moffett's Creek Grange, No. 33, P. of H., the following were installed officers for the ensuing year: Master, T. M. Smiley; Overseer, Wm. C. McKemmy; Lecturer, Henry Wright; Steward, Wm. M. Buchanan; A. S., J. W. Berry; Chaplain, C. G. Berry; Treasurer, J. C. East; Secretary, T. J. Martin; G. K., J. A. Lucas; Ceres, Mrs. Ellen Berry; Pomona, Mrs. M. E. Berry; Flora, Miss L. R. Smiley; L. A. S., Miss M. E. East.

SECRETARY.

The address of the Master and Secretary is Moffett's Creek, Augusta County, Va.

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DEVOTED TO

Agriculture, Horticulture, and Rural Affairs.

L. R. DICKINSON.....Proprietor

RICHMOND, VA.,

JUNE, 1875.

No. 6.

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See the report of Mr. A. M. Bowman, President of the Baldwin Augusta Agricultural Society, to the Virginia State Agricultural Society, published in this number of the *Planter and Farmer*, and note the fact that the “Eureka” is not only much the best of the six fertilizers he tried, but that it was also the cheapest, and bear in mind that at the time he tried it he did not even know who was manufacturing it, and followed his example in ascertaining what is the *best* and also in letting the farmer know which is the best. The value of accurate experiments, and the purchase from reliable manufacturers, cannot be overestimated.

WM. G. CRENSHAW, Pres. FRANK G. RUFFIN, Supt. State of Va.

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DEVOTED TO

AGRICULTURE, HORTICULTURE AND RURAL AFFAIRS

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON, PROPRIETOR

New Series. RICHMOND, VA., JUNE, 1875. No. 6

[For the Southern Planter and Farmer.]

EXTRAVAGANCE.

“We complain of the scarcity of money, hardness of times, and have come to the erroneous conclusion that farming will not pay. But much of the fault is in ourselves. We continue to live in the same luxurious style as when we were in affluent circumstances, instead of regulating our expenses according to our incomes.”—*Extract from communication in May No.*

This charge reminds me of one not wholly dissimilar, which is quoted and answered by General Johnston in his “Narrative”:

“Another, a class of Southern people, attribute our defeat to a want of perseverance, unanimity, and even loyalty, on our own part.” And the reply: “As to the charge of want of loyalty, or zeal in the war, I assert, from as much opportunity for observation as any individual had, that no people ever displayed so much, under such circumstances, and with so little flagging, for so long a time continuously.”

The self-condemnation quoted above, from the letter of a farmer, is doubtless intended as a friendly admonition that we should nerve ourselves to make the exertions and bear the privations which the exigency of our situation demands. Yet it sounds like a reproach; and none, I am convinced, from my opportunity for observation, which has made me acquainted with the way of life in several counties and towns of Virginia, could be less deserved. The failure of Virginia farmers to retrieve their fallen fortunes has hitherto been as signal as the failure of our efforts in the cause of self-government. For such a result there must be an adequate cause, and that class of people who undertake to furnish us solutions of all such problems, sought it and found it, as usual, on the surface. What more natural than that the blame should fall where the suffering fell, and the farmers should have to bear, in addition to their other burdens, the

reproach of unthrifty habits, the want of industry, economy, perseverance. It is a feeble expression of what I believe and feel, to say that I heartily accept General Johnston's noble vindication of the Southern people (which ought to be read by everybody in the restored Union.) against the injustice done them by a class of themselves; not a deliberate injustice, but an almost involuntary utterance wrung out of them by the agony and bitterness of defeat and ruin. As to this question there no longer remains the world over any difference of opinion. And was it then to be expected that a people who proved themselves in a disastrous war the peer of any that ever existed, in all the solid as well as brilliant qualities which combine to form the highest type of manhood, would prove recreant in the obscure and desperate struggle which awaited their return to their desolated homes? A struggle literally for life against the reluctant powers of nature, and such an accumulation of adverse circumstances as scarcely any people of modern times—certainly not since the Thirty Years War—have been called to encounter. That some have succumbed to the later test who by the aid of moral stimulants bore themselves bravely must be admitted. It was to be expected. But that the Southern people generally, and Virginians especially, have worked like they fought, and suffered with equal fortitude in peace—even the peace of desolation—as in war, is the testimony of all impartial observers; the cordial testimony of our late enemies. Surely we may afford, without vanity, to “see ourselves as others see us”; to do ourselves and each other the justice they cannot withhold, rather than indulge in morbid self-depreciation. The example of General Lee is often held up to us as a model, and we all know his career in war and in peace. But it is permitted us to remember, for our encouragement, that General Lee, like Washington, or Henry, like his own father, or his sons, was a *representative* Virginian—the noblest of all it seems to me; but just such a man as the best Virginia influences must turn out working on the best Virginia material. That there have been hundreds and thousands like him, and thousands yet remain, differing only as “one star differeth from another,” history and experience forbid us to doubt.

I regret to trouble you with a long communication on a subject so barren. But “my soul is weary” of this absurd and mischievous talk about the extravagance of men who literally “eat their bread in the sweat of their brows.” The newspapers are full of it, we hear it from the stump and the pulpit, and the charge is echoed by all who have not felt the shoe pinch, until even a class of farmers, who get their opinions ready made, though they may be struggling for bare existence themselves, accept the current theory that the root of our misfortune is luxury and profusion. Having shown the improbability of the charge on general grounds, I would briefly state the result of my own observations, admitting at the same time the instances which your correspondent doubtless had before his eyes. That many farmers live beyond their income is indeed true, for their income is nothing, or not enough to provide the plainest food and clothing. But I

have yet to meet with the first farmer, whatever his former affluence, or even the present extent of his investments in agriculture, who failed to practice strict and judicious economy both from necessity and choice. The only difference I perceive in those whose circumstances were formerly affluent is that they, as in duty bound, suffer and labor most contentedly. No people ever displayed, under circumstances so disheartening, a more earnest, patient, intelligent devotion to duty—to the duty of toiling, hoping, and waiting. Each seems to feel that he toils and saves not for himself alone but for all, for the common weal. Among the hardest and most cheerful workers are those who work for posterity with no hope of better days for themselves. The time may come when the farmers of Virginia will practice even greater economy and industry than at present, for they have proved themselves capable of any exertion, any sacrifice. But, instead of farther trials, I trust we may look forward to some not very distant reward for those so nobly borne already. A part of the reward we may confer now: unstinted praise for all that has been done, charity for unavoidable weakness and failure, and encouragement to persevere to the end. This charge of extravagance may obtain credence among other classes with whom the farmers have important relations, and for their benefit it might seem desirable that the real causes of agricultural distress and failure should be pointed out. But they seem to me sufficiently obvious, and having already been tempted to write too much, I will leave them, as I would fain have left this vindication of the class with whom I am temporarily identified, to some abler pen.

T. P. L.

Fluvanna, May 7, 1875.

MARYLAND MECHANICAL AND AGRICULTURAL ASSOCIATION—THE MANURE QUESTION.

The Maryland Mechanical and Agricultural Association met yesterday afternoon at their room, Eutaw and Fayette streets, Allen Bowie Davis, president, in the chair, and T. B. Dorsey, secretary. There was a good attendance, and much interest was shown in the discussion, which was on the subject of the application of barnyard manure to soils. The participants in the discussion were Col. Wm. Webster of Baltimore county, A. B. Davis and Mr. Warner of Harford county, J. J. Myerly of Howard county, and W. A. Bennet, Ezra Whitman and Samuel Sands of Baltimore county.

Mr Sands said that in feeding cattle the question of replacing in the land those constituents taken away was to be considered. The manure intended to nurture the land should contain just such constituents as the land needed. If phosphoretic elements were taken away they should be replaced. Animal manure is deficient of that much needed constituent, and hence as the best nutriment for land the speaker recommended a mixture of phosphate matter with manure. This would give the greatest yield in return. This was a subject that failed to receive the attention it deserved here in Mary-

land. In Ohio the farmers at first built their stables over running streams and got rid of their manure, forgetful that their lands would be eventually impoverished.

At the present time, notwithstanding the longer time cultivated, Maryland land was about as good as that in Ohio. Pennsylvania land is good because the farmers attend to this matter and keep their soil rich. Farmers must learn to regard cattle in a measure as manure manufacturers, and if only straw is fed to cattle, what can be expected? They must have meal and rich food. The liquid excretion of cattle was the most valuable of all animal evacuations, and should by all means be utilized.

Mr. Ezra Whitman, in answer to a question, said that unfortunately on his own farms he was unable to get enough barnyard manure, as he had but little stock. He bought it from his neighbors, however, and used it in preference to any commercial fertilizer.

The chair said that inasmuch as Mr. Whitman was largely engaged in the business of manufacturing fertilizers, the society could not but appreciate his candor.

Mr. Sands, continuing the subject, said he thought bone dust the best phosphoretic matter to unite with barnyard manure.

Col. Webster said he believed bone dust a cheap application for the purpose, but he did not think the application of phosphates at all necessary. The barnyard manure, with the phosphoretic acid found in salt and other such substances, was sufficient. It had been ascertained that on the first farm ever cultivated in the State of Maryland the yield per acre was now double what it was in the time of Lord Baltimore. In all parts of the world where attention is given to manuring, the crops at present are about double what they were five hundred years ago. *It had been found that for forty cents worth of plaster as much good could be wrought on land as with five dollars' worth of phosphates.* The soils of Harford county lack lime, and therefore that is a good application.

Mr. Davis said that when plaster was first used its effects were so good that farmers thought they would be rich immediately. Plaster soon exhausts itself. Mr. J. B. Matthews, of Howard county, a most successful farmer had found plaster over manure a beneficial arrangement.

Mr. Sands said one great trouble was that if your next door neighbor used plaster and you manure and phosphates, he would reap all your benefits, as plaster will attract from a distance the ammoniated elements so nourishing to farm land. Prof. Stockbridge, of Massachusetts, State Superintendent of Agriculture, had ascertained by careful experiments that he could ascertain the exact amount of commercial fertilizers necessary to any land in order to secure the yield of a given number of bushels of grain. That is to say, he had taken certain land yielding fifteen bushels of corn per acre, and determined that a certain amount of mineral manures added to the land would give a yield of twenty-five bushels per acre. An increase in the

amount of manure was sure to bring a proportionate increase in ratio to the yield. In conclusion, he was convinced that if the nitrogen element was present in land the other ingredients would be found in the air and elsewhere.

Mr. Davis presented the following resolution, which was unanimously adopted:

Resolved, That the true object of the farmer should be not only to draw from the land an annual revenue, but also to increase the value of the funded capital invested in the soil, the increase of the invested capital being necessarily an increase of the periodical revenue.

It was resolved to appoint a committee of ten active members to make preliminary arrangements for the September exhibition at Pimlico. Before adjournment it was announced that at the next meeting the subject would be the feeding of cattle, when Mr. Wm. Mosher of Harford county, a great cattle feeder, and other gentlemen, will express their views.

[For the Southern Planter and Farmer.]

PROLAPSUS OF THE UTERUS.

(FALLING OF THE WOMB.)

Prolapsus of the uterus is one of the most annoying phenomena liable to follow parturition. It consists in the womb passing outside through the vulva. This condition occurs principally in animals which give birth to only one young—as the mare, cow, and ewe—as the uterus in these animals is more particularly brought into play in the expulsion of the young during birth. It is commonly seen in debilitated animals and in stall-fed cows that are constantly kept in the stable. Among the causes I would state colic, retention of the urine, tympanitis, overfeeding, general weakness of the animal as the result of ill-feeding, and lastly, the position of the mother, standing on a depending floor during the period of carrying the young. [If the length of the stall is 10 feet, the fall in the floor should not exceed 3 inches.] It appears usually immediately after birth—rarely after two or three days. The first indication for treatment is the replacement; this should be done as quickly as possible, as the parts are liable to become inflamed and swollen, thereby rendering the replacement in time difficult. [If it is not done at all, gangrene will set in, which will end the life of the animal.] Another reason why in nervous mares it should be replaced quickly is, that their kicking and rubbing may produce severe injuries, thereby causing inflammation of the womb and the lining membrane of the abdomen (peritonitis), which often proves fatal. Cows are not so susceptible to the latter diseases as mares, but prolapsus of the uterus occurs more commonly in cows than in mares.

First, all dirt requires to be removed with blood-warm water. and if any after-birth should have remained, this should be carefully re-

moved. If any is attached to the cotyledones they should be moistened and carefully loosened by bathing with warm milk. Before manipulating, the operator's finger nails should be cut and rasped, so as not to irritate the parts more than is necessary; also oiling his arm before introducing it. In order to render the animal quiet for the operation, an infusion of chamomile flowers (about one handful to a pint of hot water) with an ounce of laudanum might be given. In some parts of Europe it is common to give cows a pint of whiskey with a couple of spoonfuls of sugar. It will usually suffice by putting on a twitch, or forcing the mouth open to prevent or relieve partly the straining of the cow. This being done, the operator places two assistants on each side of the falling womb to raise it, by means of a piece of clean cloth, to the height of the vulva. Then with half-closed hand the operator pushes the same from the lowest point back into its place, progressing slowly and cautiously, making use of the moments at which the animal is at ease, taking care to replace it completely. In difficult replacements it is, perhaps, best to first empty the rectum, either by means of the hand or injections, and the bladder by the introduction of a catheter. In all cases it is better to operate on the animal while standing up. The closed hand should remain in the cavity and respond to the straining, which will lessen considerably in fifteen or thirty minutes. In slight cases, where the prolapsus has only existed for an hour or so, the hand may not need to remain any longer than half an hour or an hour, if the straining has entirely stopped. But it usually requires two, three to four hours. In a couple of cases where the prolapsus had lasted for sixteen to twenty hours, it required ten to twelve hours before the hand could safely be removed. When one arm gets tired, it has to be carefully changed.

In cases where it is not convenient to employ a person at the position for any length of time, a bandage should be made, consisting of a broad, thick piece of leather, with a cut above to allow its adaptation under the tail; a pair of straps going over the back forward, to be fastened to a surcingle; a pair of straps below, passing between the legs right and left, to be attached also to the surcingle; a round opening corresponding to the anus allowing the passage of dung, while a narrow, longitudinal opening below, corresponding to the vulva, gives exit to the urine. The bandage can be removed in a quiet animal after two to three days, while in a restless beast it may not be safe to remove it before ten to fourteen days. The animal should not be allowed to lay down during the first twenty-four hours. Occasional injections of weak soapsuds are of service to loosen the bowels, which will prevent unnecessary straining. If the straining remains very severe, injections of cold water into the uterus may be tried. One ounce of laudanum may be given in one pint of an infusion of chamomile flowers, or three or four onions fried in good butter, and then cooked in about one pint of the cow's own milk, and half given at intervals of half an hour. The animals should be kept

on low diet, and, on bettering themselves, be slightly exercised. It is also a wise precaution to have the back of the floor of the stable somewhat elevated.

P. PETERS, V. S.

[For the Southern Planter and Farmer.]

THE PEANUT.

This crop has made so great progress in the last few years as to attract the attention of all who own lands adapted to its growth. It is stated, in an article upon the cultivation of the peanut in the report of the Department of Agriculture for 1868, that during the late war its "merits became extensively known among the soldiers; so that when the armies were disbanded a knowledge of them was carried to every part of the country." Hence the large increase in the cultivation of the peanut, and in its shipment from the port of Norfolk to New York—estimated then at several hundred thousand bushels, and believed at the present time to exceed a million.

It is believed that the soil of large portions of Eastern Virginia is well adapted to this crop. It is, at least, well worth a trial in those parts of our own country which seem to possess the necessary requisites for its successful production.

The chief essential is a light gray soil, not over sandy. This soil gives to the pea its light, bright color, which is esteemed its finest quality in the markets. As the land should be clean, it is deemed best to plant after corn—but better still, after a crop of stock peas. It is highly important to secure for seed the best quality, and this, too, when it has been carefully protected from exposure to bad weather. The use of lime on the land is especially recommended. The land should be plowed to the depth of four to five inches; furrows opened three feet apart, and deposit in them 125 pounds of Peruvian guano, or 150 to 200 pounds of super-phosphate of lime; cover up with the plow into three feet beds, which should then be levelled for the reception of the seed about the middle of May. The pods should be shelled with great care, so as not to break the shell of the pea, and all defective ones be rejected. Plant two seeds eighteen inches apart, covering to the depth of one to one and a half inches. About two bushels are required per acre. Some rows should be planted closer to furnish plants for any missing hills; this replanting should be done in about two weeks after the planting. Keep the land perfectly clean with plow, cultivator, and hoes especially. In a wet season, three workings may be necessary to clear away weeds and grass, all of which must be eradicated before it is laid by. Avoid covering up the vines, which by that time will have spread widely, and the first fruit then forming.

The next work will be the harvesting of the crop. This should be done after the first frost—about the 1st to the 10th of October in our section. First loosen the vines with a three-pronged fork; then pull them up and shake off the dirt, and leave them to dry. If dry, they can be shocked in two days after. Lay two fence rails

upon supports high enough to promote a free circulation of air under them; upon these shock around stakes seven feet long, making the diameters of the shocks about the length of the vine. Protect the shocks with straw caps. In two weeks the ripe pods may be picked from the vines; dry, fan, and clean them. A skillful hand will pick two and a half to three bushels per day. Care is necessary to keep the nuts from becoming heated or mouldy, stir them, then, until the hull is seasoned thoroughly.

The usual product is from twenty-five to one hundred bushels per acre. Even larger crops have been made by the best cultivators. The prices are not so high as they were a few years ago, but they are still remunerative. For a prime fancy article \$2.50 may be obtained per bushel, while those of ordinary and inferior quality range from one to two dollars. At these prices peanuts are more profitable than cotton at twenty-five cents per pound, or tobacco at ten cents.

The vines make excellent provender for stock, but they may be used to greater advantage in enriching the land for a second crop to be raised from the same land.

For the foregoing sketch of the culture of the peanut I am indebted to the article in the report of the Department of Agriculture, and mainly to an excellent treatise on the same subject by Mr. Doothat, of Weyanoke, on James River. The first may be seen in the January number of the "*Southern Planter and Farmer*" for 1870, and the other in the succeeding April number of that year. To those who propose to engage in the culture I recommend these two articles. The few trials made in our county justify us in believing that the peanut may become a valuable crop upon soils suited to it; at least, it may be a profitable auxiliary to our standard cereals.

ED. T. TAYLOE, *Chairman*.

[For the *Southern Planter and Farmer*.]

BELLEVUE SHORT-HORN BREED.

An account of a recent visit to Bellevue Stock Farm, the property of Mr. A. M. Bowman, the president of our Baldwin Augusta Agricultural Society—one of our best farmers as well as the prominent breeder of short-horn cattle in the Valley—will not be without interest.

Bellevue is situated on the north bank of the South river, which, it will be remembered, skirts the Blue Ridge at its western base, and about three miles south of Waynesboro, on the Chesapeake and Ohio railroad. The farm is in the form of a parallelogram, extending for some distance along the river, and having every field watered by it, thus furnishing a pleasing combination of gently rolling upland and river bottom in each enclosure. The residence is near the river, about midway of the farm, sufficiently elevated to secure good drainage, and flanked by a mammoth barn, affording ample room for his numerous herd of cattle—which, I may add, are staunchioned in

the capacious and comfortable stables. There is a capital piggery, where the Berkshires are comfortably housed, and hard by is the "Prindle Steamer," which is used in preparing food for hogs and cattle. Mr. B. uses a horse-power to cut his corn-fodder, hay, &c., before steaming, and finds both arrangements are very economical. His wheat crop is promising; looks as though he intended adding the State Agricultural Society's premium for "the largest yield" to that already obtained for corn, oats, and hay. The farm, taken as a whole, is evidence of good management and successful culture. Mr. Bowman is an earnest advocate of orchard grass; says "he was raised on it (?), and therefore knows of what he speaks."

In regard to stock, he unites with spirit and intelligence a love for the business, elements which guarantee success. A thoroughbred has no charm for him simply because it has a pedigree, and its name has been offered to the public through the columns of a herd-book; but his selections are made with particular and single reference to such strains of blood as for some intelligent purpose he desires to infuse into his own herd, or because of some intrinsically valuable characteristic which he wishes to make available in the construction of that *ideal* short-horn which is ever before his mind's eye.

Among his Berkshire swine the two imported sows, Hillhurst Rose and Rosedale are splendid specimens; but it is particularly of the short-horns of which we would speak:

The herd consists of seventeen (17) females and three (3) males. At their head the Earl of Weldon, 14,175, a $\frac{7}{8}$ Duke upon a Rose of Sharon foundation, coming three years old; rich red, with some white, mellow hide, good handler of truly grand style.

Of the Bates-Cragg family there are three representatives. Lady Craggs—Handsome ren-roan, fully developed, weighs over 1,800; remarkable for width of hip. This cow has been recently bred to 2d Earl of Oxford, a pure Oxford bull.

Lady-Craggs 2d—by duke of Onandaga, 6,778; like her dam, with all her good points.

Miss Craggs—colored like dam, out of Lady Craggs and by Albert Edward, 11,278: a very promising four-months old heifer.

Of the Rosamond family there is the massive white cow Rosamond 9th, got by Royal Briton, 27,351, out of Rosamond 7th by Weehauken, 5,260. This cow will soon calve to Don Bernardo, 11,641. Mr. William Marfield, of Kentucky, says of her: "She is one of the best specimens of a short-horn I ever saw." This is compliment enough.

Of the Lonaws—justly so celebrated—Greenwood Lonaw 2d is his only specimen. She was by Jeremiah Duncan's show bull, Duke of Airdu, 2,743. Though eleven years old, she has proved a great breeder, and numbers many celebrated animals among her offspring. Roan in color, and nearly due to calve to Sheldon's Duke, 7,260.

There are two Elvinas (Mr. Coffin's family)—Elvina 8th by Plantagenet, out of Elvina 3d by the 11th Dude of Thorndale—a red,

and her daughter a roan, by Earl of Muirkirk, 14,170. This family have no less than five Bates and Princess crosses upon an excellent milking foundation, and are the descendants of imported Pansey by Blaize (76).

Amongst the show animals of the herd, Jenny O'Gaunt by Red Duke, half-sister to the famous Fanny Forrester; and Cindirella 2d by Royal Bellville, son of imported Royal Briton, are specimens which have more than once worn the ribbons in successful competition at the great exhibitions North, West, and South.

There are some eight specimens of short-horns which properly belong to the useful kind, *e. g.*, while combining the *intrinsic* qualities of form, color, and general characteristic, lack those *extrinsic* attributes which so much enhance the money value of the animal. To one not familiar with pedigree, as individual specimens they compare well with the most highly prized animals in the herd.

The cattle are in fine condition, showing they have been well wintered; but Mr. B. claims not to be a *high feeder*. If he does not *pamper or use the curry-comb* as much as might be advisable, he could readily find excuse for this delinquency in the *precept and example* of another of Virginia's distinguished short-horn advocates.

Too much credit cannot well be accorded to one who thus gives talent, time and means to the building up of so handsome a herd of thoroughbred cattle. The needs of the dear old State are realized, the solid groundwork upon which her future prosperity must rest is appreciated, and could we only boast of a greater number of *live* young men, the near future would realize our most sanguine expectations. Delivered from the thralldom of poverty, clothed with the elements of power, resulting from the increased value of her agricultural and stock products, supplemented by her mineral and manufacturing resources, she would again advance to the foremost ranks, the leader in peace as she has been the embattled queen in war, and the "mother of States and statesmen."

W. G.

[For the Southern Planter and Farmer.]

GRANGE INFLUENCES.

The principles upon which the confident expectations of success, in the movement of the Patrons of Husbandry, rest, and their efficacy, efficiency, and certainty are generally acknowledged. In almost every department of human life among us, they are in daily practical operation, to the benefit of those who use them, and, unfortunately for the farmer, to his detriment. The chief difficulty in our use of them is the intense individuality impressed upon us by our pursuits, each farmer having been, under the force of circumstances, constrained to form the habit in his daily operations of thinking and acting for and within himself; hence it is extremely difficult to impress upon those who have not given thought to the subject, the feasibility and propriety of throwing off the effects of this habit of

thought, and introducing the principles of combination and coöperation in a thousand forms, in matters heretofore looked on by the farmer as exclusively to be decided on and acted on by his own individual judgment and will, and to be carried out by his own individual exertions. This habit of thought is stronger among our own people perhaps than elsewhere, from the "peculiar institution" which so recently prevailed among us, and hence we have the greater difficulty in presenting properly the logical results of Grange influence.

I have found more difficulty in inducing those who were formerly large farmers to give attention to the subject than any other class, simply because the habit of mind formed by being able to command the combination and coöperation which wealth gave, has prevented a fair consideration of the new processes and combinations which the new order of things requires. Hence a Grange Lecturer is often placed in the position, when he undertakes an exposition of our principles, of going over the demonstration of truths, which every one acknowledges to be true in the abstract, but which it is often necessary to go over in their simplest forms, in order to show their practical application to the direct objects of our noble Order. Truth, too, travels slowly, and it is almost a necessity, fairly and properly to present the truths we teach to the mass of the farmers, that those truths should be presented in a practical form, thus eliminating from the demonstration the side issues resulting from opposing habits of thought and action, and this can best be done to practical men only inside of our gates, and with the facilities which actual practice affords.

We teach, what we honestly believe, that the principles we profess, embodied in our organization, must of necessity produce the greatest good to the greatest number. That high morals can and must be infused into all belonging to our Order and made to characterize each Patron. That an improvement in social intercourse must result from our principles as applied by us. That a new impulse must be given to true education if Grangers discharge their duty, and that a wise superintendence and supervision is carefully guiding and guarding them in the discharge of that high duty. That in every form we present, to the extent of our ability, the best models of business, moral, social, and educational improvement, to each and every Patron by his own hearth-stone, in his domestic circle, and in Grange; that as far as human power will allow, we lift the humblest man or woman in the Order, to all the advantages and facilities possessed by the most elevated, the best informed, and the purest within our gates, and in doing so, by wise provisions, we exclude to the extent of our ability, any degrading influences; and that we do this by the voluntary action of those who unite with us, without one restraint upon individual action to which any reasonable being could object, embodying only the influences of love and kindness to accomplish our ends.

The mode by which the material interest of each Patron is sought

to be advanced and guarded, is necessarily more or less public, and for the most part generally understood, and its efficiency, to a great degree, demonstrated among ourselves, by results already obtained, but the recent introduction of the Order, the poverty of our people, and other hindrances, in distance from the place of meeting of subordinate Granges, the want of buildings devoted to our purposes, and the necessary time required to put the machinery in motion, to develop the moral, social, and educational influences of the Order, have caused delays, which it may be well to take advantage of, in order to enable us when fully organized to develop those influences in the most attractive and at the same time most useful form.

The moral teachings and the result of those teachings must be each day, more or less, brought out in the daily business transactions between man and man, and in the active exercise of the nobler charities of life, to be shown in the exact justice and wise liberality meted out to all, as it ought to be demanded and insisted on by each Patron for himself, and be impressed upon the public mind in all our acts, and thus ensuring that we will bury in the oblivion of contempt, any futile efforts which may be made to turn our influences in channels where the only results would be for personal objects and dirty gains.

Of necessity we are forced to bring prominently forward our material objects, because upon success in that view emphatically rests the building we propose to raise in which the moral, social, and educational benefits we seek may have a permanent abiding place: and it is of the first importance to impress upon every Patron in Virginia that in the development of the business system we are now inaugurating, every Patron ought to be bound by his own sense of duty to the Order, by his own interests, and by the aid and protection it is his duty to give to the weaker members of the Order, to throw his influence and his business, from the smallest to the greatest matter, into the hands of the capable business brother in whose care we have placed this important trust: and no skill on his part, no devotion to the cause, can ensure success in his delicate and difficult task without this aid heartily and freely given.

For our moral and social advancement we can rest in confident hope upon the influences necessarily brought into play when both mind and body are relieved by success in our material objects, from the continued temptation, the constant attrition of our highest hopes and aspirations, by depressing want and absorbing care, the consequent upspringing of the mind and the ardent desire for improvement becomes intensified in its force, and causes good to grow and bear rich fruit in every mind, and when minds in this condition in constant intercourse and communion with other minds, enlarged, expanded, invigorated, and powerful, from the accumulation of knowledge, must grow up, at least to an approach, to the higher level of those thus improved, and the benefits of education not only as it is commonly defined, but in its enlarged and true sense, must impress on all Patrons its benign result, even though the more humble among

us may not be able to follow step by step the process by which the more gifted arrive at conclusions. We may be able, under these influences of our Order, to master the results, and follow with confident steps the lights which knowledge throws upon all, even to that far boundary where science stays her proud step, and bows in awe and reverence before that inscrutable veil which mortal hand may never lift.

W. M. AMBLER.

[For the Southern Planter and Farmer.]

"THE CLEVE ESTATE."

Your committee whom you appointed to examine and report on the "Cleve Estate," belonging to Maj. H. B. Lewis, most respectfully submit the following to the King George Agricultural Club.

This Estate which was purchased from the descendants of King Carter, lies immediately on the Rappahannock, distant some twenty miles from the city of Fredericksburg, and makes up in part, the valley of the fertile Rappahannock, which ranks second to no lands in Tide-water Virginia.

Cleve comprises 530 acres open land and 180 in wood and timber; also, a marsh valuable for ducks and trapping.

The brick mansion which is situated but a few score yards from the river, in front of which is a wharf, can but attract all passers by river and land, as both substantial and tasteful, having been erected in the olden time, when both material and structure were more solid than in these late days of progress.

It contains 20 large and comfortable rooms, spacious hall, affording ample room for all to enjoy the genuine hospitality ever dispensed by the Major and family.

The out buildings are in good order and keeping with the mansion, all enclosed in a beautiful lawn, in which are growing shade trees of various kinds.

The Major, who has an eye to profit as well as the ornamental, makes good use of this lawn during the summer months. We found his blooded sheep, young Alderny and Devon calves enjoying the fine grass.

There are two apple orchards on this Estate, both having been set out some 18 years ago; one from the State of New York, and the other from Virginia. Maj. Lewis informed us that in his opinion it was more profitable to select winter apples from Virginia, and early fruit from the North. The winter apple from the North matured too soon, and therefore became a summer or fall apple in this climate.

The cattle, horses and oxen, we found in good order, though the horses indicated that the owner was fond of large crops. He thinks the Devon stock are best adapted to this section, "though not equal to the Alderny for richness of milk." They are good for the dairy, beef, and best work oxen.

The fencing on this Estate is good, though not much is required. We would call attention to a three plank fence on ditch bank, six to

eight inches wide, nailed to cedar post or locust, which is simple, cheap and durable.

The garden was well filled with summer and winter vegetables, and showed what Mrs. Lewis was doing with her part of the domestic duties, as it is the case with *most* wives in this section.

Your committee in riding over the Estate found the corn field, which had just been laid by, in most beautiful order, being much struck with the size, evenness, and free from grass and weeds. We requested the Major to give us the practical working. He informed us, he first fallowed the land with three-horse ploughs—planting the corn early in April as practical with Bickford & Hoofman's drill, arranging the tubes to plant two rows at a time, and if desired, to place with the corn a small quantity of fertilizer, which will hasten up the corn, thereby enabling one to commence working sooner than otherwise. By drilling the corn it is distributed so that it can be readily thinned out with the hoe, one to one stalk in the hill, by which operation it is both thinned and weeded. In about four days after planting, the land is run over with a three-horse harrow. When the corn is well up, the two-horse cultivator is used—the two front teeth being removed; with this implement, one man can do the work of two single cultivators; the corn is then thinned with a hoe; when 18 inches high the earth is thinned with single ploughs. In his opinion for laying by the corn, the plough is better than the cultivator, destroying the grass and weeds more effectually. He generally gets it laid by before going into harvest. We must call attention to the disposition of the fodder and stalks on this Estate, and beg leave to say, that if the Major is *correct*, much time and expense is saved by his new departure from his brother of the plough. "After gathering the corn from the stalk and housing with care he turns upon the field all kinds of stock—having an eye to one or more shifts, in order to manage them, thus saving hauling food. He says his stock come out of the winter much better than under the old plan. We see one great advantage, which is, the regular deposit of the manure made by them, and tramping in *good weather* must improve the land for wheat

We then examined the wheat, which had, to the eye of most farmers been badly treated during the past winter, by stock of all kinds; yet the growth of straw was good, and every promise of a happy yield of twenty bushels per acre.

He informed us that when practicable, he greatly preferred to fallow his land for wheat than sow on corn land, not only less tax on the land than by following a corn crop, but the summer ploughing is more destructive to king sassafras and other pests by which our patience is sorely tried; and again, not attended with the heavy expense of cutting off, and shocking the corn.

He thinks with most practical men of this class, that good three-horse ploughs are economy, prefers to sow the wheat between 21st September and 15th October, in order that the wheat may have suffi-

cient growth to resist the attack of fly. He uses the improved Bickford & Hoofman drill; sowing one bushel wheat per acre, one hundred pounds Guanape with one hundred pounds of plaster per acre; the plaster prevents the guano from packing, and must add much, not only to the wheat, but the grass, if used. After his wheat gets well up, "he commences his new departure," turns on it all his stock of every kind and continues till 1st January.

JNO. D. ROGERS, Chairman.

[For the Southern Planter and Farmer.]
TUCKAHOE FARMERS' CLUB.

It was a charming day, and the Club enjoyed their meeting and reception at the beautiful home of Dr. J. G. Beattie. Colonel Randolph Harrison, Dr. Walker, and General Ransom met with us and contributed to the occasion.

Mr. Martin failed to prepare his essay on the cultivation of the "Irish Potato," so we had some talk about it.

Mr. Channing Robinson thought the essentials were good seed, good season, and plenty of manure; that the proper time to plant was as near the 1st of June as you can, and in rows three feet apart and the potato dropped two feet in furrow; planting in the fresh furrow immediately on opening and throwing up two furrows to cover. Not to plant on freshly manured land, but best on a clover fallow, or on land manured in the fall. Also, it was contended, that land suited to the early potato is not suited to the late potato; that for the latter the red, stiff land is the thing, and in all cases plant the late crop whole and *not cut*. It was thought by some that the potato can be increased by removing all save the two upper eyes, which always produce better. Mr. Robinson says he planted last year 30 bushels and realized 750 bushels, for which he got \$2.50 per barrel.

It was thought advisable at this season to move the seed from one place to another to avoid sprouting, and Dr. Beattie and others concurred that it was not necessary to change the seed often, but to re-plant our own. Dr. B. has been replanting the same seed for four years without any deterioration.

Dr. Beattie urged very forcibly the necessity of protecting our birds from the merciless and indiscriminate slaughter, and depredation on our farms, of the huntsman as well as crowds of idle boys, white and black; and Major Harvie as earnestly represented the necessity of some legislative action to protect us against the constant trespassing and damage of stock running in upon us.

Your reporter thought that when we get some representatives who will not *first* enquire whether such protective laws are *popular for them* or not, and not until then, need we look for relief.

The "Peg Roller" came up as unfinished business, when Dr. A. H. Perkins urged its benefits and explained its working and construction. The Doctor says get a sound log eight feet long, to be two feet in diameter after being properly rounded. Lay off parallel line $6\frac{1}{2}$ inches apart, which will give 11 lines; along these lines bore

holes with a two-inch augur $6\frac{1}{2}$ inches apart and 6 inches deep, commencing and ending far enough from the ends (say 2 inches) so that the holes will not break out. After the holes are bored and pins driven in, the log should be sawed across the middle into two parts. The first pin hole on the second line should be in the centre of the space above, thus alternating the positions; and some care should be taken so as to bore the holes near where it is to be cut, so that they will be two inches from the ends. Take a piece of tough white oak, saw it into sections of 10 inches long, split these sections into square pins about two inches in diameter, reduce the size of one end a little, and drive them square into these holes six inches deep, leaving four inches out of the log. After driving the pins into the log it should be sawed into two sections and the ends banded with iron. A hole should be bored through the centre of the logs from one end to the other; in this hole run an iron axle with lynch pins and washers at the ends. Upon this axle the roller revolves. A two-inch rod for axle is strong enough with a frame of tough scantling three by four, giving room for the log with its pegs to revolve. To the two corners of the frame attach an ox-chain, and to the middle of said chain the necessary bars for two horses. Any farmer can make this roller of large or smaller size as preferred.

The Doctor has long and practical experience with this roller, and says that the "Peg Roller" as an efficient instrument for compacting and pulverizing land is much superior to the smooth roller. It leaves the land as if a large flock of sheep had been driven over its surface, and the indentations $4\frac{1}{2}$ feet apart are fine receptacles for seeds of either grass or wheat; and, furthermore, the uneven surface is an advantage as it furnishes protection and fresh earth to the plants during the freezing and thaws of winter.

Mr. Cowardin was not present to further enforce these views as expected, and the Club adjourned to meet at your Reporter's home next month.

J. A. LYNHAM, Reporting Secretary.

Henrico county, Va., May 13, 1875.

POTATO.

From each successive year's experience, the shrewd farmer draws a practical lesson, which, if properly applied, will materially assist in making his special calling a success. There is very little to be made in farming or gardening by the game of chance, or, as it is sometimes called, "good luck," but industry well directed, will eventually be rewarded, while carelessness and mismanagement are just as certain to reap their reward.

Every branch of industry has, from various causes, to battle against a "blue" season, and farming or gardening forms no exception to the rule. At present, farm wages are high, with no indications of any change for the better. My neighbor asks, "How, under existing circumstances, are farmers to make ends meet?" My reply is, substitute horse for hand-labor, adopt better methods of culture, concentrate the work, and manure on fewer acres, so as to produce maximum crops, and

by these means lessen the cost per bushel of producing. The expense of cultivating is the same, whether the yield is one hundred or three hundred bushels of potatoes to the acre.

The potato crop is an important one in every State and territory in this country. Two hundred bushels to the acre is not a large return from well fertilized and properly tilled ground; still we find that the average crop of the country is not quite one hundred, even in favorable seasons. Taking the price of potatoes at seventy-five cents per bushel, by adopting better methods of culture, the increased value in the United States of this crop alone would amount to over seventy-five millions of dollars a year.

Although the price of potatoes has only advanced a trifle within the past ten years, and farm wages and other expenses have nearly doubled, yet I feel confident that I can make as much per acre now, cultivating potatoes, as in 1860; simply by making use of the methods named, and planting varieties of potatoes that are more productive than the Mercer or Prince Albert. There is no system of farming so perfect as not to be susceptible of improvement; and the intelligent farmer is always ready to make a change or follow a new method of culture, when it is evident that by so doing he will increase the product per acre or lessen the expense of producing.

Our method of cultivating potatoes, which has given entire satisfaction for the last three years, is substantially as follows. The ground, which is a heavy clay, and naturally very poor, is fall-ploughed, throwing it into "lands" about twenty feet wide, and left in this state until spring. When the soil is dry enough to be worked in April it has a second ploughing, crosswise—never turning the soil less than ten inches deep. The manure is then spread broadcast on the surface, the quality of the soil regulating the quantity. However, we seldom use less than twenty two-horse loads of barn-yard manure or compost to each acre. When fish guano is used, it is mixed with soil for a week or two before planting-time, and then spread over the surface at the rate of from three-quarters to a ton to the acre. When barn-yard manure is used, the ground is harrowed before spreading the manure and with special fertilizers, such as phosphate, bone-dust or guano; the harrowing is done after applying the manure, giving the ground only one "scrape," to level the surface. We change the seed every two years. For seed, I prefer large sized potatoes, cut into two, three, and four pieces, a fortnight at least before planting, and then dusted with wood-ashes. This I have done in wet or inclement weather during the month of March, when the men cannot work to advantage out of doors. With everything in readiness for planting, the seed potatoes are put into barrels, carted to the field and placed at convenient distances across the lot, so that the person "dropping" will lose no time and waste no strength in carrying the potatoes from one end of the field to the other. This may appear trifling, but I find, when this plan is carried out, the work goes on more rapidly, and two persons will drop as much as three, when no system is practiced. From the effects of the fall ploughing, the alternate freezing and thawing during winter, and with a ploughing in spring, the ground will turn up kind and mellow, just in the right tilth for planting. The potatoes are put in at the third ploughing, in the following manner: Commencing at one side of the field, twenty or thirty feet from the fence, the ploughman with his horses strikes a straight furrow and returns with

a back furrow. On the second time around, the droppers follow the plough, placing the potatoes from fifteen to eighteen inches apart in the loose ground just turned over, and in a position so that the next furrow-slice will cover the seed about four inches deep. The furrow-slices will average from ten to twelve inches in width, and the seed is planted in every third furrow on either side of the starting point; this will leave the rows of potatoes about three feet apart. This is wide enough to admit a horse-hoe for cultivating during the early stages of growth. By the system of back-furrowing there is no time wasted, either by the persons dropping or the man with the plough. We employ two German women, who drop as fast as the two horses will plough the ground and cover the potatoes. On loose, mellow soil, this force will plant, on an average, two acres a day, working ten hours. In this way, the soil is left in better condition to facilitate the growth of the young potatoes than by any of the methods in general use, that I have heretofore practiced in growing potatoes for market. The seed is placed in the side of the furrow-slice, and is not displaced by the horse that walks in the furrow. Occasionally the plough is thrown out by the point striking a stone, and one or two of the seed left without covering, but in the next time around this can be repaired and the seed properly covered.

With a very little practice the ploughman will run each furrow as straight as a "bee-line." I never have had rows of potatoes come up more evenly than for the past three years, when planted in this way.

Another method is, when the ground is ready to open the furrow with a one-horse plough, spreading the manure in the furrow; then the potatoes are dropped in place along the bottom of the furrow, and by means of the plough again are covered about three inches deep. When the young stocks are just coming through the surface, the field is harrowed, running the harrow in the line of the rows. We use for this purpose a blunt-toothed harrow, which levels the surface, destroys the first crop of young weeds, and as far as I am capable of observing does no injury to the potatoes. I am aware that many potato-growers condemn the harrow for this purpose as doing more harm than good. When I am convinced that this is the fact, I will at once abandon its use and adopt some other improved implement to do the same kind of work.

When the young plants are well above the surface, I run Howe's horse-hoe or Perry's Scarifier between the rows, going twice in each space, and as close to the stocks as it is possible, without cutting them. This operation is repeated once at least every two weeks, until the potatoes come into blossom, when the cultivation is stopped. Sometimes a few heavy showers of rain will compact and harden the surface; in such a case we use Mapes's one-horse lifting sub-soil plough to run once in the middle, between the rows, and loosen the soil three or four inches deep. Our plan is to prepare the soil thoroughly before planting, and then, during the growing season, to keep merely two or three inches of the surface loose and free. There is little or no hard labor required by following this system of culture. In an ordinary season, the horse-tools will do all the work necessary to keep the surface loose and free from weeds. I make it a rule, however, to go through the field once with the hand-hoes, cutting out any weeds that may be growing in the lines of the rows where the horse-tools cannot reach. Under good management, potatoes should be kept free from weeds and grass, until they are in full blossom. After this date cultivation may be suspended, for any weeds

that may then come up do little or no injury to the crop. The stalks shade the ground so that the growth of weeds is sparse; although it is often advisable to have some scattering tall weeds pulled by hand before the potatoes are dug.

In cultivating early varieties of potatoes on strong ground they can be harvested in time to get a crop of turnips off the same ground, which may prove as profitable as the crop of potatoes.

We grow on our farm from one thousand to one thousand five hundred bushels of potatoes a year for market. During the past ten years we have sold none for less than seventy-five cents per bushel by the quantity, and a large proportion of them would average one dollar a bushel.

On ground well manured and tilled, two hundred bushels of marketable potatoes to the acre is about an average crop in our section; these are worth one hundred and seventy-five dollars. Deducting the expense, there is left from one hundred to one hundred and twenty-five dollars. With early potatoes, harvested in time to sow a fall crop of Yellow Stone Turnips, which often yield as much as the potatoes, there will be a net from both crops of about two hundred dollars an acre. Last summer we dug from an acre of Early Rose one hundred and ten barrels, and sold them at three dollars and twenty-five cents per barrel, for table use.

HARVESTING.—Although we have tested numerous potato-digging machines, there is none that has given us satisfaction. We still hold to the old method of removing the stalks, then with a plough throwing a furrow away from either side of the row, and turning out the potatoes with the digging-fork. By this method a man can easily get out thirty bushels a day, at an expense of from five to six cents a bushel.

STORING POTATOES.—Potatoes for table use should be stored in a cool, dry, dark cellar. They will keep better if a small quantity of soil is mixed in with them at the time of putting them away. When potatoes are left exposed to the sunlight they soon turn green, a bitter principle is evolved, and when cooked they have a nauseating and unpleasant taste. Every observing farmer knows that it often happens, either from the washing away of the earth, or from careless hoeing, that a portion of the potatoes in a "hill" is left exposed to the light. These potatoes soon change color, and are worthless for table use. This kind of exposure also hastens decay, no matter where the potatoes are kept. Even when purchased for family use, in small quantities, say a barrel or a bushel at a time, they should be kept in a dark corner of the cellar.

VARIETIES.—There is a long catalogue of varieties of potatoes, many of which have only a local reputation. The old favorite Mercer is no longer cultivated to any extent. The Carter, too, has passed away, with twenty other kinds that once were popular. The seedlings of the late Professor Goodrich are quietly dropped from the approved lists for general culture, and their places filled by other and more promising sorts. How long these varieties will hold their place in public estimation experience only can tell.

Among the most popular early varieties may be named the

EARLY ROSE, a seedling introduced by Mr. Breese, of Vermont. With three years' trial it has attained a national reputation. It is well worthy of it, for it is the best early variety that we have at present, either for family use or for market.

The Rose is a large-sized potato, smooth skin, few eyes, flesh white, and steams or boils mealy.

DYKEMAN is an old standard, cultivated by Long Island gardeners extensively for the New York market.

PEERLESS is more productive and larger than the Early Rose, equal to it in quality, and is, for a late variety, what the Rose is for the early.

PEACH BLOW has always been a favorite, and a standard of excellence in quality. It is a large, round potato, takes the whole season to mature, and is difficult to boil even on account of its shape. It is also subject to the rot.

GLEASON is a seedling of the Garnet-Chili. It grows large, roundish and has a peculiar roughness of skin, by which it can always be distinguished. It is a late variety and of good quality.

KIDNEY.—Medium size, productive, of fine quality for home use. It keeps well, retaining its good quality through the winter.

JACKSON WHITE is cultivated extensively as a late variety for market. It is long, the eyes deeply set, quality good when grown on dry ground.

EARLY MOHAWK is an early variety, recently introduced, very productive, but inferior in quality—about equal to the Harrison for cooking.

INSECTS.—The potato is liable to the attacks of various insects, both in the foliage as well as the tubers. For a number of years past the English wire-worm has seriously injured the potatoes in New Jersey. The grub feeds upon the young tubers, disfiguring them so much as to make them unsalable. The grub of the *Elaters*, that injures the potato, is long and slender, having a hard, smooth skin, of a brownish yellow color, and, according to Harris, lives in its feeding state five years.

An application of ashes has been recommended as a remedy; but we have not found it to be of any service. Rape cake, broken into small pieces and scattered in different places through the field, attracts the grubs; they collect to feed upon it, and large numbers may be destroyed.

The Colorado Potato bug (*Doryphora lineata*) has been doing mischief in the West, but as yet it has not reached New Jersey or any of the Eastern States. These bugs appear in great numbers, destroying all the foliage and injuring the crop very seriously. Dusting with powdered White Hellebore is said to check them. A. D. Compton recommends a solution, made of one part salt, ten of soap, and twenty of water, for syringing the vines and effectually checking the bugs.

A correspondent of the Farmers' Club recommends one part of Paris green and twenty parts of flour of bone, mixed and sifted on the vines, an excellent remedy. One pound of the green will be enough for an acre.

The directions given for the field management of potatoes can easily be adopted in garden culture.

One bushel of seed will yield about twenty bushels of potatoes if planted on good ground and well tended.

P. T. QUINN.

There were in the Union 19,492 subordinate Granges on the 1st of June. Granges are being organized at the average rate of twenty-five per day, which, up to the present, would swell the number to 20,000. These Granges, on an average, number fifty votes.

ON THE VALUE AND CULTURE OF THE SOUTHERN (AGRICULTURAL) PEA.

We are having frequent applications for information on the above subject, and find it impossible to answer as much in detail as we would like. We have prepared the following article, made up entirely from the essay of Mr. Edmund Ruffin which received the prize offered by the Virginia State Agricultural Society in 1854, which we offer for publication in the *Southern Planter and Farmer*, as the best means of reaching those desiring information.

Mr. Ruffin says: This Southern *Pea* is properly a *bean*. Its value as a grain, fodder, and fertilizing crop has not been known until within the last thirty years, and even now is not fully appreciated in Virginia. The greatest benefit from its use is limited to the region in which cotton *may* be grown, but it is very profitably used a little farther north when the early varieties are cultivated. For regions entirely away from the cotton limit the English pea is more suitable.

The general characteristics of the whole Southern pea family are the following:

The seeds of nearly all the varieties are kidney-shaped; the growth trailing, or in vines, sometimes twelve or fifteen feet in length, running on the ground and matting with each other, or climbing by twisting around any elevated support. The leaves are in three together, and very large. The main or tap-root descends perpendicularly and deeply into the earth. The vines and leaves are tender and succulent while green; the seeds are in long pods, usually containing from ten to fifteen seeds.

There are numerous varieties, which are more or less strongly marked for distinction, in the color, size, and flavour of the seeds, the different kinds of pods, in the size and growth of the vines and leaves, and in the early or later maturing of kinds that might otherwise be undistinguishable.

The variety or varieties to be preferred for culture will depend on the uses designed for the crop. If cultivated solely or mainly for table use, the best flavored, and also the earliest kind of good flavor, will be preferable; the greater or less production will be of much less importance than early maturity and delicate flavors.

If the great object of a pea-grower is to obtain provender for live stock, then the peas most productive in grain or seed, and of which also the pods will remain longest sound in the field through bad weather and in winter, will be most valuable.

If the main purpose for which the pea crop is grown is to manure the land, then the kind most desirable is that having the most luxuriant or heavy growth of the entire plant—in root, vine, and leaf, as well as seed—though, of course, the seeds are by far the most valuable for manure as well as for food.

The colored peas—black, red, buff, &c., are the best vine-bearers,

and best for general growth of the entire plants. These are mostly late in maturing—with some exceptions, however.

The most productive kinds of peas for North Carolina, and farther south, are not suitable for Virginia, because of our more northern latitude and shorter summers. Lower Virginia is rather too far north for the *best* returns of this crop, or the general maturing of the later and more productive kinds of peas. It is the opinion of the best pea farmers that the most valuable manuring portion of the plant is the ripe seeds; and that until they generally ripen the pea crop has not reached its best condition as manure. For these reasons the varieties once most preferred have latterly been substituted by the early black pea. The earlier maturing of any particular kind of pea, if desired, may be obtained, in a series of years, by regularly saving for planting the earliest ripened seeds only.

The early black pea has perfectly black large seeds; is a good vire-bearer, but not equal in that respect to the buff and some other late peas. The ripening on broadcast sowings begins, in this latitude, in the latter part of August. Contrary to the general rule as to colored peas, this kind is deemed the richest and one of the most palatable of eating peas. Although (upon general reasoning only) I infer that this pea is less valuable for manuring than some later kinds, I have for some years deemed the early black as best for my culture, and still more so for any northern or western locality.

It has long been understood by practical men that peas and beans of all kinds make very nutritious food for man or beast; and the investigations of chemists have found in these plants, or their seeds, constituent parts which indicate much more nutritive value than in wheat, corn, or any other grain, root, fruit, or herb used for food. A peculiar vegetable product, called by chemists *legumin*, is found most abundant in the seeds of peas and beans. This product is a vegetable *albumen*, approaching to animal matter in character, and, like animal matter, is rich in nitrogen, and nitrogen is the source and principle of what is understood commonly by the term *richness* of either food or manure. What has been said as to the nutritive qualities of peas and beans applies to them as food for man, and with much force to sustain the claim of equal value (and superiority over corn) as food for beasts. I deem it quite safe to suppose, that a bushel of peas is, for feeding purposes and farm consumption, worth full as much as *one and a half* bushels of Indian corn. But for feeding stock, there is another important part of the crop—the vines and leaves—which has not come under consideration. Hay made from the Southern pea vines is more palatable to farm animals than perhaps any other forage.

It has long been a generally received opinion among practical farmers, that certain plants—of which red clover was the most noted—were less exhaustive, or more productive of fertility, than any other plants known. All of these plants are of the botanical order of *Leguminosæ*, of which a plain distinguishing character is

to bear its seeds in *Pods* like peas or beans. The red clover will be found to bear its seeds in pods, with a single seed in each, while the white clover has several, and each pod is in appearance a miniature garden pea.

Wherever the growth of the Southern pea has been permitted to exercise its manurial power the effects have been as marked, and have become as well established, as those of clover in more northern regions. The same greater contents of nitrogen which makes these crops more nutritious as food makes them also more nutritious, or fertilizing, as manure.

In the germination of seed and growth of plants, so situated that they could obtain no supply of nitrogen except from the air, Bous-singault found that leguminous plants and crops, in addition to drawing supplies of carbon from the air, and of oxygen and hydrogen from water in the air and in the earth, also derive a portion of their richest nutriment (nitrogen) from the atmosphere. This, then, shows why leguminous plants must (as they are known to do by experience) draw more support from the air, and less in proportion from the earth, than any others; or, in other words, that, as manure, they must return to the earth more of manuring principles, and especially of the richest, in proportion to the quantities drawn from the soil to sustain their growth.

In 1848, after some previous years of experiment, I reached the extent of giving an entire field—that being one-sixth of my arable land—to peas, sown broadcast, and mainly for manure. Previously the land had been in five shifts. The change of rotation gave the same area divided into six shifts, of which one was in wheat after clover, and one in wheat after pea-fallow, and one in corn—in all, three-sixths under grain crops. The first objection that has been made by all to this change is, the expectation of reduced products from reduced extent of culture. In practice, I found the general product of the farm in wheat to be increased throughout, and that of corn not lessened, except in the first year, and since increased, and increasing, as is the general state of fertility. I have found the field of wheat after pea fallow, to be more productive than that after clover fallow; yet the latter, in my practice, has the great benefit of having had all the putrescent winter-made manure of the farm applied to the preceding year's clover as top-dressing; and the pea has the disadvantage of the ploughing not being begun until all the clover fallow has been completed. The pea growth just referred to is the primary and sole crop for the time, and has entire possession of the ground. In this way the crop attains full growth and maturity, and is most beneficial as manure. But much the most extended and usual mode of pea-manuring is as a secondary crop, grown under and among corn, and therefore, neither producing fully or maturing well, and, of course, furnishing far less manure. Yet even in this less efficient manner of operation nearly all who have tried it testify to the valuable effect produced by such manuring.

The plant prefers sandy or medium soil and subsoil. Like all

other leguminous plants, it does especially well on calcareous or limed land: but though greatly preferring naturally calcareous, or limed or marled land, the pea will grow pretty well also on non-calcareous soil. On lands suitable to gypsum, that manure, in very small quantities, produces the like wonderful effect on peas, as it does on clover. The pea does not generally produce better in grain (or seed) by occupying very rich land. On such, though producing greater growth of vine and leaf, there will be fewer pods and peas than on land of but moderate fertility. If climate and season are highly favorable, peas will produce well in grain on stiff land. All land to produce peas well should be well drained. Early planting or sowing is also unfavorable to the best growth of vines as well as of pods and seeds, even when the very young plants escape the usual fatal effects of cold. If peas are sown early (say 15th to 20th of May, in Virginia,) and cold weather soon follows, the young plants are checked in growth, and will be greatly injured, if not mostly killed, by numerous little speckled beetles, which eat all the seed-leaves before any of later growth come out. The plant is very impatient of cold, and also of wet weather when young, and is as much favored by warm weather through all its growth.

In Virginia there are three usual modes of planting or sowing peas:—

1. The oldest and most extended culture is to plant the peas after, and among, corn. When the corn is mostly about eight or ten inches high, and has been just ploughed and hoed, the peas are planted, either in the narrow intervals between the stations of corn, if in drills, or in a ploughed furrow, the last made by the plough in the middle of the wide intervals between the corn rows. In either case usually ten to fifteen peas are dropped together, and come up and grow in a cluster. So many seed are put together to enable the young plants to better force their passage through the earth; but some experienced cultivators think five or six plants together will produce better than a greater number. One more ploughing only is afterwards given to the corn, which, at very little trouble, is all the culture required for the peas.

This is the primitive mode of raising peas, practiced where the saving of the grain was the only or main object. It is still general on the lightest and poorest lands in southeastern Virginia, because poor as is the usual product (about two bushels per acre), it is greater for such land than any other crop which could be made as cheaply. Rich land would produce much less than poor, in proportion to fertility, as the growth would go mostly to vines, and the corn on such land would shade the peas too much. It has been thought that the corn crop would be diminished to the extent of the production of peas on the same ground. I deem this to be a mistake. One carefully made and observed experiment was so clear on this head as to leave me no doubt on the question. I will say, however, that whether the peas are injurious to the corn depends on the previous advancement of the growth of corn. If the corn is made, or nearly

matured, while the pea plants are still quite small, then the latter will have done little or no injury to the former. And if the corn is cut off and shocked so as to give all the ground and sunshine to the peas while they are yet young, they will not have been so injured by the overshadowing corn as to prevent their afterwards yielding a moderate and important manuring crop.

2. The next most extensive mode of culture is also as a secondary crop amongst corn, but made by sowing broadcast when giving the last horse-tillage, and covering the seeds more or less perfectly by that tillage process. The crop all goes for manure, and is seldom ripe enough in Virginia even for manure. The sowing is usually done with us early in July, and about the time that the corn is beginning to tassel.

3d. The third mode, and, as I think, the cheapest and best, to raise the pea crop for manuring, is to sow the seed broadcast on a separate field (without corn). This is my general procedure on the six-field rotation—first year, corn; second, peas sown broadcast; third, wheat on pea fallow; fourth, clover; fifth, wheat on clover fallow; and sixth, volunteer clover, grass, or weeds, partially grazed.

In North Carolina, when land is under a pea crop only, it is usually planted in rows or drills, and tilled very slightly with ploughs, and sometimes also with slight hand-hoeing. No doubt this will make a cleaner and much better crop. The seeds are said to be more perfect, and the gathering of the pods to be much easier.

It is much the best that the ploughing for the pea crop shall not begin before May 1st, and still better if not before the 15th. If much earlier, and not ploughed a second time, weeds will start and will greatly hurt, and sometimes smother, the peas. The first good, and warm and settled weather after the middle of May (in the latitude of Richmond) the sowing of peas should be begun on the latest ploughed land, and the harrows immediately covering the seed on that and also on the ground previously ploughed. This early sowing may be hazardous if the weather should become wet and cold, but some risk must be incurred to forward so large and laborious an operation. The seeds sown on fresh ploughed land, from 1st to 15th June, on my farm, will usually make the cleanest and best crop; they may be sown and do well as late as July 15th, on wheat stubble, after removing the wheat crop, and the sowing may continue even later, though to less profit.

In sowing the seed of peas broadcast, it is important that the ground shall be moist enough for germination; and if on drier ground, that the seed shall be sown as quickly as possible after the fresh ploughing, and immediately harrowed in before the upper earth dries. The ploughing under of green pea vines to prepare for wheat is a troublesome operation, on account of the frequent choking of the plough, but not laborious to the team. The vines should be combed straight in the designed direction of the ploughing, to prevent worse choking. The best implement for this purpose would be a large horse-rake, and next, a large triangular drag or harrow, with wooden

teeth. In the absence of both, a common harrow will serve, though not so well. The first severe frost kills every green pea vine, and then the ploughing becomes much easier. I have never observed any certain and obvious difference of appearance in the wheat grown on the peas ploughed under before and after the vines were killed by frost.

In peas among corn, and in broadcast growth, in North Carolina, laborers gather and beat out one and one and a half bushels a day as tasks. On drilled peas they can as easily gather two or three bushels, and sometimes go to twice these quantities.

So far we extract from Mr. Ruffin's essay. We will only add that for table use the black-eyed pea is generally cultivated, and that in Virginia and the greater part of North Carolina the early black pea has, at this time, so far superseded all other varieties for general agricultural purposes that there is practically no other variety to be had in any quantity. One and a half bushel per acre is the quantity usually sown broadcast. When it is intended to sow peas among corn, it is important to plant the rare ripe or some other early variety of corn, and thereby give both peas and corn a better chance.

ALLISON & ADDISON.

[For the Southern Planter and Farmer.]

FROM KENTUCKY.

It may interest some of your readers to hear how we as farmers are getting on in this portion of Kentucky. Ours is an entirely planting community, crops being diversified, raising corn, wheat and tobacco. Corn grows well, usually producing from 30 to 50 bushels per acre, which is generally fed to hogs for market. Our best lands, when wheat ripens well, will bring from 15 to 30 bushels per acre. Logan county is embraced in the district of country where the celebrated Tobacco known as Clarksville Tobaccos are grown. We usually raise from 800 to 1200 pounds per acre without any fertilizer, except what little is made in our stables. We rely mainly upon clover to keep our lands up. The severe cold weather in April destroyed all our fruit, and very seriously damaged all wheat that was jointing, and putting back late wheat so much that it is feared it will be cut off by the rust, which usually attacks wheat when ripening after the twentieth of June. This year we won't commence cutting before the twenty-fifth. Tobacco plants are plentiful, though nearly three weeks later than usual. There will be very little set before the first of June if the weather is favorable from this time on. Hogs are scarcer than usual. As we had a poor crop of corn last year, it is now worth four dollars per bushel. I am greatly in favor of diversifying our labor, so we shall always have something to sell, and I think I will write you how I keep in pocket change by keeping a dairy of eight cows, and not letting it interfere with my usual crops.

Logan county, Ky.

D. Y. WINSTON.

TURNIP.

The turnip crop is an important one to the farmer, as well as to the market-gardener. But, as yet, its culture is nothing like as extensive as the value of this root for feeding stock and for culinary purposes would warrant.

In the milk and beef-producing districts of the Middle States turnips can be grown with profit for winter and spring feeding of stock. Sheep will thrive well when fed in part with turnips through the cold weather.

We are inclined to believe that the time is not far distant when the good husbandman will be forced to accept this proposition, and devote more acres to the production of this root for stock-feeding.

Within the last dozen years the culture of turnips has very considerably increased in this country; it will no doubt go on steadily from year to year, but more rapidly when farmers will make use of some of the improved horse-tools. These, when properly applied, will reduce the expense of cultivation at least one-half.

The main crop of turnips is grown in the fall, and very commonly as a second crop. Those who grow early potatoes for market, harvest them in time to sow turnip seed, and by this method produce two crops from the same ground in one year. In locations where this plan can be carried out, the crop of turnips will often give as much profit as the crop of potatoes. We have frequently grown a crop of Strap-leaf red-top turnips on the same ground with corn, by sowing the seed broadcast in July, just before the corn was cultivated the last time. We have often had, in this way, three or four hundred bushels of good-sized turnips in November, from sowing only one pound of seed to the acre.

SOIL.—The turnip will grow freely on any kind of soil—from a light sandy loam to a heavy clay, provided the ground is mellow and fertile when the seed is sown. This is the important point in growing turnips. As a matter of course, those kinds that have to be cultivated in rows can be grown with much less expense on a free soil without stones, than on a heavy clay soil with stones. Nor does the soil need to be very rich to produce a full crop. When sown on rich soil the growth of tops will be too large, without a corresponding growth of the roots.

On ground well manured in the spring for early potatoes, and after these have been dug, in July, ploughed and harrowed, a crop of turnips can be grown without any additional manure. But we usually, before harrowing, spread broadcast two or three hundred pounds of superphosphate to the acre. In garden culture, on ground where potatoes, peas, beans, &c., &c., have been taken off, some wood-ashes, bone-flour, or superphosphate, may be applied in the same way with advantage, before sowing the turnip-seed.

CULTURE.—The ground should be well worked before sowing the seed. When a summer crop of potatoes has been grown, one ploughing, in most instances, will suffice; but otherwise two plough-

ings will be found to give the most satisfactory returns. The time of sowing for the main crop will depend on the location and the kind to be grown. At our farm in New Jersey we sow the Ruta Baga from the 20th of June until the 15th of July, as the case may be.

With the Yellow Stone, Aberdeen, Long White Cow-horn, and Strap-leaf Red-top, we sow them in the order named; in relation to time, from the middle of July to the 1st of September. The last-named sort, which is very extensively grown, will, on well-prepared soil, attain full size in much the shortest time. In 1866 we sowed a field of this kind between the 10th and 15th of September, and in ninety days we gathered a fine crop of turnips.

In growing turnips for market or for feeding purposes, the Ruta Baga is most highly valued. This variety is always grown in rows; in field culture they should be two feet apart, so as to admit of horse-tools in cultivation. We ridge the ground before sowing the seed, in the same way and for the same reasons as recommended for Carrots. The seed is sown with a machine, using one and a half pounds to an acre. If the seed is fresh and the weather favorable, in twelve days from the date of sowing the plants will be up; then a "root-cleaner" should be run between the rows at once, running twice in each space; this should be repeated in ten or twelve days. The cost of cultivation is trifling, if the ground between the rows is disturbed often enough to prevent the weeds from starting. "A stitch in time saves nine"; for if neglected at this stage of growth the expenses will amount to five times as much, and at the same time the crop will be lessened.

When the plants are two or three inches high they may be thinned out to four inches apart in the row. The thinning can be done more quickly by one person going in advance of the others, with a hoe four inches wide, and chopping out the young turnips, leaving three or four in a bunch every four inches apart. These are removed by hand, allowing only one to remain in a place. When timely care is taken with Ruta Bagas, this is the only hand-labor called for during their growth. It is frequently recommended to sow the Ruta Baga in seed-beds, and then, at the proper time in favorable weather, transplant into rows at the distances named. We have tried this method time and again, and always with the same result; that is, an increased expense in growing this crop, under our management.

The Yellow Stone and Aberdeen we sow two and three weeks later, treating them in the same way as Ruta Bagas. On very mellow ground we sometimes sow the seed on the level, marking the rows three inches wider, so as to give more room for the horse-tools.

The Cow-Horn and Strap-leaf will yield more to the acre when sown in rows; but, as a rule, farmers sow these two kinds broadcast, because there is no "bother" in cultivation. Last year a friend of the writer raised eight hundred bushels of the Cow-Horn on an acre. The seed was sown broadcast during the first week in August, using only three-quarters of a pound of seed. When sown broadcast and

scattered evenly, three-quarters of a pound of fresh seed will be found a full complement for an acre.

In garden culture, turnip seed should always be sown in rows twelve or fifteen inches apart, and the plants thinned to three or four inches apart in the row. For table use, a medium-sized turnip is preferable.

Two ounces of seed, comprising two or three sorts, will give enough for family use during the fall, winter, and spring.

HARVESTING.—In the latitude of New York turnips are pulled in November, by hand, throwing three or four rows together, the roots all one way. The tops are then cut off and the turnips placed in a root-cellar, or pitted, in the same way as carrots and beets. If grown for stock-feeding, the white kinds should be used first. The yellow sorts and Ruta Bagas can be kept, if necessary, until spring.

PROFITS.—These will depend on the locality and the purposes for which turnips are grown. Where we are located, Ruta Bagas and Yellow Stones are worth, by the quantity, from forty to sixty cents a bushel, and sell readily at these prices. All through the past winter Yellow Stones sold for one dollar and seventy-five cents per barrel, and Ruta Bagas for two dollars. At these rates turnips pay handsomely, when grown as a second crop, with a yield of from four to six hundred bushels to the acre.

VARIETIES.—Of these there can be found a long list on seedsmen's catalogues, but, like most other kinds of vegetables, only a few kinds are grown by those who have experience. Among the best is the—

AMERICAN IMPROVED RUTA BAGA.—This variety is cultivated both for market and stock, and is the best on the list. The flesh is solid, tender, and of delicate flavor when cooked.

LAINGS IMPROVED is a more vigorous grower than the foregoing, and, if on strong ground, the roots will average a third larger in size. They are purple above ground, and yellow below. The flesh is solid and yellow.

YELLOW STONE is one of the most profitable and popular varieties that we grow for market or for table use. The root is nearly round, medium-sized, color light yellow. The flesh is yellow and sweet.

YELLOW ABERDEEN grows to a large size. It is generally grown for feeding cattle; for this object it is a valuable variety.

COW-HORN.—This kind grows rapidly, forming a long root, not unlike the white carrot. The Cow-Horn is cultivated exclusively for feeding stock, and when sown in good ground the yield is very large—from eight hundred to one thousand bushels are frequently produced from an acre.

STRAP-LEAF RED TOP is well and favorably known in almost every part of the country. It is purple above and white below. The flesh is white, and very tender when cooked (p. 252).

FLAT DUTCH, OR SPRING.—The Flat Dutch is sown in the spring, as an early variety for table use. It is grown on a large scale by

gardeners, in the vicinity of a market. It is a white turnip, and when of medium size the quality is good.

Turnips are subject to the ravages of the same kinds of insects that injure cabbages. We have known instances where the whole crop was badly injured by *club-root*. The black flea (*Haltica striolata*) destroys the young plants when they appear above the surface.

The same remedies recommended for cabbages will answer for turnips.—*Quinn*.

LEAPING WITHOUT LOOKING.

Some of the agricultural and "secular" papers make their columns lively with advice to all good husbandmen to engage in various enterprises "with millions in them," and thousands of farmers, one after another, a perennial crop, are acting on the suggestions. The strawberry speculation is, perhaps, widest spread, and stacks of plants are set each year without ever bearing fruit enough to pay for what they cost. Fancy poultry is tempting, and high-priced eggs are bought, and may be a few chickens are hatched, but in the end it is discovered that no hen will lay two eggs a day. Then bees are recommended, especially for women, and a good deal of studying is done, but the honey is not abundant, and year after year the complaint is made that "this is the worst season for bees we ever had." Some undertake to raise mushrooms, without knowing a mushroom when they see it; others, reading that ducks are sent to the London market by the ton, get eggs and go to hatching, while others still plant grape vines by the acre, or dwarf pears by the thousand, and in most cases the conclusion reached is that corn is a good crop, that potatoes always sell, and that nothing is much better than a few three-year-old steers to turn off in the spring, unless it be the value of the same in wool.

The continued disappointments are due almost wholly to a want of knowledge in regard to details, and to acquire this is to acquire what may be called a trade. Nothing would seem more simple than to raise strawberries, and yet the majority fail generally for want of well prepared ground and the necessary cultivation, and it is probably true that it will take a man five or six years before he can find out what is the matter. And so it is in regard to all other pursuits and enterprises. It would be "splendid," as the girls say, if one could be born with hereditary experience, so as to take up the thread where the old folks left off, and many an aged and broken man knows that if he could have had this inheritance, with all the checks and safeguards that it brings, he would now be rich and happy, instead of poor and acquainted with grief. The next best thing, in the absence of such hereditary gift, is to feel our way and look before leaping.—*New York Tribune*.

[For the Southern Planter and Farmer.]

AGRICULTURAL PAPER VERSUS DOGS.

I would like, through the columns of your excellent journal, the "*Farmer and Planter*," to suggest to the tillers of the soil a plan whereby each one may be enabled to become a subscriber to your journal, and at the same time be pecuniarily benefited. In these times of financial pressure we see and realize the fact that it is proper and necessary for us to economize, but unfortunately we do not always begin at the right place; we too often pursue the "penny wise and pound foolish" policy. But to my suggestion: Let every farmer estimate the annual cost of the worthless dogs he is keeping, include all the scraps, slops, and waste generally about the kitchen, consumed by the dogs; then let him take to the yard a pig of some good stock—say Chester or Berkshire, or better still, a cross of the two; let piggie have for twelve months everything before consumed by the dogs, and if he feeds him anything besides, charge to account of the pig, and when he is slaughtered deduct the amount of the extra feed from the value of the pork, and if he has not enough left to pay two years' subscription to the "*Planter and Farmer*," then he may say I am a bad calculator.

April 28th, 1875.

G. H. WINFREY.

N. B.—It will be seen that I have said nothing of the eggs (which is our currency) and of the sheep destroyed by the dogs, which I know, by sad experience, are no unimportant items. I neglected also to say, when your estimate is made and your pig brought to the yard, *kill the dogs*.

G. H. W.

CULTURE OF PEANUTS.—A correspondent of the *Country Gentleman* writes upon this subject as follows:

We first get our land into the best possible condition by plowing and harrowing, finishing with the smoothing harrow. Then we lay off rows with a marker, drawn by two horses; the driver standing on the marker and drives the stakes, so as to lay a straight row. The marker makes two rows, three feet apart, and attached to each runner is a small wheel, which makes a sign or mark at sixteen to eighteen inches apart. Hands follow immediately, dropping two kernels at every mark. Then follows a hand, covering with a hoe, one to one and a half inches deep, and pressing the back of the hoe down solid on the hill after covering. The plant will be up in six to twelve days. As soon as the row can be seen, we throw the dirt away with a turning plow. When the plant is well up we work the ground around the plant with hoes, and cultivate between the rows with cultivators. The ground should be kept mellow and free from weeds by constant use of cultivator and hoe. Four hoeings are not too many. The plant should not be disturbed after the 1st of August. In this section we plant from May 10th to June 1st. It is better to have all planted by May 22d. If crows or moles are troublesome, use tar on the seed, as you would for corn. Seed dug after a heavy frost is

not reliable. It will take about three bushels of seed to plant an acre. Great care should be used in selecting seed, and none planted but smooth and plump kernels. Stiff soil will not produce a first-class nut. The soil should be sandy loam, and well limed. Chocolate-colored soil produces the most desirable colored nuts. If dug before frost the vines make excellent fodder for cattle and horses, but the nuts are better filled and heavier if dug a few days after frost.

AGRICULTURAL SOCIETIES.—WHAT THEY NEED

At the present time, when our Agricultural Societies or some of them at least, seem to be going to decay, the following ideas of Prof. Rodney Welch upon this question, as published in the *Chicago Times*, may not be without their lesson. We commend them as worthy of the consideration of the officers of Agricultural Societies generally:—

“What we want is an agricultural society which shall do something to develop and improve Agriculture, which shall render it attractive and exert an influence to cause men of wealth and education to, at least, take an interest in farming, orcharding, stock raising. To do this, something else is wanted besides an annual fair. To do this, it is necessary to make experiments in the productions of all the crops now growing in the vicinity, and to record them; to test the value of fertilizers of every description, and the various ways of applying them to produce the most good; and to examine in a scientific and practical manner the capacity of every soil.

But more than these things need to be done. We want to introduce new crops that are grown in other countries of about the same latitude, and to acclimate others that grow in countries warmer or colder than our own. We want to learn more about the construction of drains, the storage and distribution of water, the preservation of meats, fruits and vegetables, the economy of feeding animals for the production of beef and milk, and the relative value of the different breeds of animals. To accomplish all these things requires the united efforts of men of ability and means—requires the formation of a society of men working for a purpose.

The Royal Agricultural Society of Great Britain employs a chemist with a number of assistants, maintains a botanical department where the acclimation of vegetables is carried on and the diseases of domesticated plants are examined; publishes reports on the progress of Agriculture in Great Britain and other parts of the world, and conducts experiments in everything that promises to reward the labor of investigation. It does not neglect the matter of holding fairs, but it does not make them the leading object of the organization.

Every farmer ought to raise his pork. He can do this by raising clover and peas to save corn. Keep but few hogs, and let them be of the best stock. Keep them within your enclosure, and push their growth from the start, and at twelve to fourteen months old they will weigh two hundred pounds.

SUBSOIL PLOWING.

From the days of Jethro Tull until within the last twenty-five or thirty years, farmers were generally content to stir the immediate surface of the soil, and did not seem aware that a greater depth of disturbance would produce larger and better results. Indeed, it was generally believed that the whole matter which went to fertilize plants, belonged to the immediate surface, or that portion known as *loam*—a name given, until very recently, to the disturbed portion only—which, by the combined influences of sun, air and decay of vegetation, changes its color. The fact that the components of the soil beneath those points were all to be found as part of the integrants of plants was scarcely known, and still less so that they could not be absorbed by them, and thus go to make up their structure, until acted on by a series of influences caused by atmospheric contact and the presence of humidity, not the result of stagnant water. Liebig first exposed the true value of the organic substances of the soil, or those parts which were not the immediate result of plant decay; and farmers slowly yielded their long cherished belief that the black portions of the soil alone could make plants. These new doctrines gave rise to the use of a subsoil plow, which, without elevating the subsoil to the surface, disturbed it, and permitted a free circulation of atmosphere between its particles. The deep cuts made by the plow also acted partially as under-drains, and permitted, under some special conditions of surface—such as the slope of hills, etc.—redundant water to pass away. Air necessarily entered, and chemical changes occurred; the surface of the particles of the subsoil were soon conditioned so as to sustain roots, and they passed into it greater depths than had been before known. These, in turn, absorbed from the subsoil larger quantities of inorganic matter, rendered soluble by chemical changes consequent upon moisture and air. The constituents were taken into the plants above, and portions not marketable as crops, decayed in the upper sod, adding to the greasy, unctuous, organic matter new portions of inorganic food for future crops. Plants had longer roots as well as greater number of fibres, and larger crops was the consequence. The decay of these roots in the soil left tubes to great depths; the atmosphere could come in laden with gases, resulting from vegetable decomposition, required by plants; rains and dews, which wash the nitrogenous exhalations of all organic nature from the atmosphere, descended into the subsoil, which gradually changed color so as to make deep, loamy soils in localities where before only sparse, shallow-rooted crops could be grown. All this was heard of by the American farmer long before he was awakened to action; and even now, when every truly practical farmer owns a subsoil plow, he can tell you of some neighbor who cautioned him against its use, and insisted that the deep disturbance of his soil would let all the manures filter downward, forgetting that, if that were true, every well would be the receptacle of the results of decay, every spring would be a cesspool, and every rivulet but an

organic charnel house. Nature, in the wisdom of her laws, has rendered the carbon and alumina of the soil, after proper exposure to atmospheric influences, capable of receiving and retaining all the results of decay; and the value of a farm must, to a great extent, depend on the depth to which its surface by disturbance is rendered capable of performing this peculiar function.

Thoroughly subsoiled-plowed lands soon become capable of deeper surface plowing, without injuring the crops; and, if under-drained, which is but the perfection of the very principles presented in theory of subsoil plowing, then all the mechanical conditions necessary for maximum results are secured; and when these exist, the chemical conditions follow as a natural consequence.

Among the advantages arising from subsoil plowing, may be enumerated the following: The value of land for agricultural purposes is, in many instances, double, especially when substances are not disturbed too deeply, which might, for the time being, be unfriendly to vegetation; the relative amount of manure required, as compared with the amount of produce, is lessened; the farm is essentially protected from the effects of drought; all future labor of the farm is materially lessened, and thus the expenses of teams, wear and tear of agricultural implements, are all decreased, while the quality of crops, and their quantity, are so augmented that, per bushel or per pound, they take a preference in every market.

We clip the above from the *Pen and Plow*, and commend its careful perusal to our readers. In connection with subsoiling, we would mention other advantages. To a great extent it prevents surface washing by absorption, holding and feeding out to the growing plants during the after and drier portions of the year the spring rains, instead of allowing them to run on the surface, as is the case in shallow plowing carrying off with it the surface soil.—*Southern Farmer*.

TREES ON THE ROADSIDE.

Continuous rows of stately trees along the roadside add much to the appearance of a farm or country residence. But it is urged that shaded roads remain wet and muddy much longer after heavy rains than those fully exposed to the sun. This is doubtless true, but as an offset we may claim that they are less liable to become dusty, and between the two evils there is not much choice. Deciduous trees only should be planted along roadsides in cold climates, because they afford shade during the season when most needed, if at all. Roadside trees may also interfere with the growth of crops in the fields adjoining by shading, as well as by absorption of moisture by the roots, but as we can scarcely secure anything without some loss, perhaps the pleasure derived from passing over a shady road during the hot weather in summer, as well as the beautiful appearance of such highways, more than compensate for the slight losses which they entail.

WHAT I WOULD DO, WERE I A YOUNG FARMER.

Perhaps I would get married; am sure I would if I had fifty acres of land, a cow and horse, was healthy and willing to labor, and provided a nice, well raised girl could be found, brave enough to marry a poor man, and not be sorry for it afterwards.

If from ten to thirty acres of land could be spared from cultivation, I would plant it in pecan nut trees, which would, in twenty years, prove a source of income to me. When past middle age, I would cultivate bees to obtain honey for home consumption at least, and, if the pasturage was good, for market also; should certainly raise cattle, for an ample supply of milk and butter; there is no good living without milk and butter; not much digestion, and but little perfect health.

I should keep sheep also, say four or five sheep to each head of cattle, and if my farm was too small to graze them, and no privilege was offered me of grazing them on the public domain, I should sell out, or move without selling, and locate myself, not in the far West, but within a line of sixty miles from the Atlantic and Gulf coast, extending from North Carolina to Alabama; would seek a healthy, level pine land, with a light sandy soil, lying upon a substratum of red or yellow clay, and near enough streams to obtain cane pasturage for my cattle during the winter. Our own State furnishes thousands upon thousands of such acres. Colleton, Beaufort, and Barnwell counties fill the bill exactly.

I would plant corn, cotton, peas, potatoes, oats, and sugar-cane; would not spend one dollar for commercial fertilizers, but all my dollars for sheep and cattle, and would keep as many as I could winter, or that could winter themselves, if the number should reach one thousand, and the farm should be proportioned to the size of the herd. Cattle and sheep should herd together, to protect the latter from dogs; and if the pasture was within two miles, they should be driven up, and penned in portable pens every night for at least eight months of the year. In this genial latitude there are but few days of winter so cold as to forbid the herding of cattle in the open air. My stock of cattle and sheep would be the source of all the phosphates and ammoniates that could be desired. They would be living and portable phosphate beds, putting their deposits just where it would do the most good, without the interposition of lazy negroes, mules, and an old rattling wagon to haul straw, and then haul out the lot treadings upon the fields. There is nothing to prevent the gathering of fabulous crops from a few acres enriched by this process. Moreover, it is a system requiring but little labor, and that job labor in a large degree, just the kind our fellow-citizens of African descent prefer to render. Our planters hire men to sit upon the fence and watch cotton-pickers. I would prefer to pay the wages to a stock minder, and sit in my house and watch my highly fertilized acres from a cool piazza, through an object glass. Where never less than one five hundred pound bale of lint cotton per acre is grown, and three is quite practicable, I should want but few laborers, and but a

little while at a time. Splitting rails, ploughing, hoeing, planting, cutting oats, grinding sugar-cane—can all be done by job, or day labor. For whenever the plan of making large yields from small areas, when the old plantation system, with a dozen mules, and its two or three dozen careless, lazy, thievish, and destructive “hands,” shall become everlastingly obsolete, all enterprising men, who take hold of high farming and stock growing at the right end, will find themselves emancipated from Sambo’s destructive clutches, and perfectly able, without the aid of exhaustive and crushing liens, to begin safely, and carry out successfully the only system of agriculture that can redeem the South and save its people from destitution.

Men of small capital should begin on a small scale, always within their means. Let it be one cow and calf, and four sheep, if no more. Instead of hiring a man to drive up this miniature herd, better hire the herd to come without driving, by paying it every evening a few peas, oat sheaves, or fresh cut grass. Stock are more faithfully responsive to regular paid wages than eight-tenths of our hirelings. Pen them in a movable pen forty by forty feet, and move the pen every ten days; this will enrich land faster, for the outlay, than any other method known to me. True, it covers less than an acre in one year of eight months, but if this area be increased each year from fifty to one hundred per cent., it will in ten years develop a snug farm, and its owner will find that he has been slowly but surely growing comfortable and independent.—DR. J. W. OGILVIE, in *Rural Carolinian*.

SOWED CORN FOR FORAGE.

The experience of the past year has given rise to the question of the merits of corn sown in drills, for feeding purposes during the drouths which frequently occur, and which lessen the hay crop to such an extent as to render a substitute for it necessary. The practice of sowing corn as a reserve crop for feeding purposes when needed, is too much neglected by the majority of farmers. Few crops yield a greater return for the labor of producing it, and in no other way can so much wholesome and nutritious feed for stock be produced as by sowing corn. We have already alluded to Hungarian grass as a reserve crop, but for dairymen, a crop of sowed corn is just the thing for mid-summer and winter use.

The corn crop may be sown from the first of June to the middle of July. The yield varies from five to ten tons per acre. The quantity of seed required is three and one half bushels of the large Dent corn to the acre. This crop, like the Hungarian, requires that the land should be well enriched. It is a good plan ordinarily to plow the land twice—once very early, then again early in June. Harrow well and mark out in furrows with a shovel plow, from two and a half to three feet apart. Cover with the harrow, running first lengthwise then crosswise. But little after culture is needed. It will be well up in eight or ten days after planting, when the shovel

plow can be run between the rows, and if done again about two weeks thereafter, the corn will completely cover the ground, and no after cultivation will be necessary.

As soon as the ears (nubbins) begin to get hard, cut and bind the crop in small bundles, shock them up together and tie the tops well. This crop may be cut with a common scythe. A cradle, having a short scythe like the one for brush, with two strong fingers of corresponding length, makes a good implement to cut it with. If well put up it can remain in the field until wanted. In this climate it is better to have plenty of shed room in which to stow it, so that whatever the weather may be, there will always be a liberal supply on hand for immediate use. All kinds of stock eat this crop with avidity, and eat it up clean, and thrive upon it better than upon any other kind of dry feed, and it is much cheaper. Farmers would do well to sow at least two acres annually. If sown to feed to cows during a drouth in mid-summer, of course a much larger area should be sown convenient or adjacent to the pasture or feeding lot. It is one of the crops that will pay.

POULTRY RAISING.

As I have made poultry raising a specialty for a few years past, I will give you some of my experience in the business. I have raised from one to three hundred chicks a year, and wintered from fifty to one hundred in different years. My success has been such that I shall tax my time and yards to their full capacity. Brahmas, especially the light variety, have been my favorites, although I have had good success with the Cochins, Plymouth Rocks, and other varieties. For summer layers, the non-setters are superior; but in winter, when eggs bring the highest prices, my Brahmas have invariably outlaid them.

In regard to profits, I find with eggs and fowls sold at market prices, an income of \$2.50 to each hen wintered. And here, let me say, in my locality (central New Hampshire) dressed poultry ranges from fifteen to thirty cents per pound, according to season and quality of the poultry, and eggs from twenty to forty cents per dozen—eggs being highest from November to February, and poultry from March to September. The price of corn averages one dollar per bushel, and the prices of other grain is in proportion. By actual experiment, I find I can raise a Brahma chick to the age of six months for forty cents. It will then bring, if an early spring chick, one dollar or more. A friend made the same experiment, and came three cents below me. I have made no account of the manure, except as an offset to the interest on money invested. In rearing a large flock, it will not do to crowd them at night; and if more than one hundred chicks are reared, they will do better if separated by a partition or fence—or what is better, if you have plenty of land, have your coops far enough apart so that they will not get together. Keep the chicks away from the old fowls; select the weak ones and

give them a better chance, and as soon as they are fit for market kill them off, as you need to breed from your most robust stock.

Keep your breeding stock yarded, and from eight to ten hens only with each cock, to insure the fertility of the eggs. In winter, keep in small flocks—say twenty-five in each coop or apartment; if a fowl should show signs of disease, take it out, and if a little extra care and treatment does not bring it round, it had better be consigned to the compost heap. Have the coops dry and warm, and keep free of vermin by sprinkling a decoction of tobacco on the nests and roosts. Provide a dust bath for the fowls; give a variety of food, with plenty of raw, broken bone, oyster shells, and fine rouen of clover hay. One hundred hens will eat five hundred pounds of fine clover hay in one winter, saving more than its value in other food, and give you more eggs than if deprived of it. Have a supply of pure water and clean gravel to which they can have free access.

These directions followed, there is no trouble in raising a large flock of chicks. Ten men, occupying as many contiguous acres, would not hesitate to keep fifty adult fowls and rear one hundred chicks each. One man can just as well keep five hundred adult fowls and rear one thousand chicks on the same amount of land, if he gives the same care and attention to each individual flock that each individual would give to his own flock.—CALVIN P. COUCH, in *the Rural Southerner and Plantation*.

MORE ABOUT ORCHARD GRASS.

In reply to a question for more complete information about orchard grass, I will state that orchard grass is more sure to stand the drought than timothy or clover, notwithstanding we fail sometimes to get a "set" by reason of a very severe drought. But we apprehend no danger after the first year, for the roots become deeper set in the ground. It will do as well sown on wheat or rye as on oats, if well harrowed in; but in all cases sow in the spring—about March—and if you sow about two bushels to the acre you are pretty sure of a stand. It makes a very strong sod, rendering it hard to either freeze or dry out, even after the grain has been cut off; therefore, if your grass gets through the first hot season unhurt, you can go on your way rejoicing in hope of a good crop.

Some of your Western readerstell me that the hot, dry winds kill their clover and timothy after they have mowed the hay off, and they fear it would be the same with orchard grass. Now I can't say how that will be out there (I have not tried it); as the winds are more severe in the West than in Kentucky, it may be that it will damage it to some extent; therefore, I would advise the Western farmers to first sow a few bushels—say four or five—and see how it performs; then they can judge for themselves whether or not it will pay to sow larger crops. It pays us more than a third more than any other grass we can sow.

Springfield, Ky.

THOS. G. HAWKINS.

HOW OFTEN MAY WE EAT?

It has been demonstrated that, at certain intervals, when food is received into the stomach, gastric juice is secreted to digest it, and that no more gastric juice is secreted than is required for the digestion of the proper quantity of food.

If a person eats twice or thrice a day, at regular periods, the gastric juice is secreted by the stomach to digest the food it has received. If, while the food is being digested more food is introduced in the stomach, digestion, in relation to the food already in the stomach, is arrested. For instance: a person takes, in the morning, a piece of bread and several potatoes; now, it will take about three hours for the stomach to dispose of that food. Suppose the person, about an hour after eating this food, takes a piece of bread and an apple or two; what would happen? The digestion that was going on in the stomach would immediately stop, and not be resumed until the food that was received last was brought into the condition of the first. Suppose he took food every hour, what would be the consequence? The stomach would become prematurely worn out, and could do nothing perfectly—working all the time without rest. But if the person possessed a good constitution and a large amount of vital power, he would not feel, at first, this drain upon his system, but sooner or later he would have to pay the penalty of outraged nature. Some persons have an enormous amount of vitality—good constitutions. It is said of these persons nothing hurts them; they can eat and drink anything with impunity. This is a fatal mistake.—*Science of Health.*

AN IMPORTANT SOURCE OF PROFIT.

We often see minute estimates of the profit in eggs, chickens, and even feathers, from poultry; but very seldom is the important item of manure mentioned. If hens are fed upon a rich and varied diet, the manure is really one of the principal items. Let us take the ordinary estimate that a hen will produce one bushel of manure in a year. This would contain, at least, one and one-half pounds of ammonia, which would be worth as a fertilizer twenty-five cents, and the phosphates and other elements are worth as much more. The result is cheap manure at fifty cents, and, as compared with the price of commercial fertilizers, is worth \$1.00. The hen will pay at least one-half of her keeping in manure. This manure being composed largely of volatile matter, it should be mixed with road dust, dry muck, land plaster, or other good absorbent, to prevent the loss of ammonia, and enable it to be sown more evenly.—*Live Stock Journal.*

Granges in Wisconsin have on hand \$250,000 toward a State Agricultural Improvement Society. They have already established forty-one co-operative associations for selling goods and manufacturing, and twenty-nine insurance companies, all in a flourishing condition and representing capital to the amount of \$4,000,000.

THE LOVE AND CULTURE OF FLOWERS.

Nothing is so pleasant and encouraging as success, and no success quite so satisfying as success in the culture of flowers. It is a pleasure with no compensating pain—one which purifies while it pleases. We gaze on the beautiful plants and flowers with a delicious commingling of admiration and love. They are the offspring of our forethought, taste and care—a new, mysterious and glorious creation. They grew—truly: but very like the stars and the rainbow. A few short weeks ago the brown earthy beds were bare and lifeless; now they are peopled with the fairest and frailest of earth's children. We have created all this grace; moulded the earth, the sunshine and the rain into forms of matchless beauty, and crystallized the dew-drops into gems of loveliness. There is no greater pleasure than this in all the earth, save that sweetest and noblest of pleasures, the fruit of good deeds.

There may be hard-hearted, selfish people who love flowers, we suppose, for there were bad angels in heaven, and very unreliable people in the first and best of all gardens: but it has never been our ill fortune to meet with one such—and if by accident we should discover a monstrosity of this kind, we would be more frightened than we were a long time ago at what we thought a ghost sitting on a cemetery gate.

To love flowers, however, because of their sweetness and beauty and companionship, as the wonderful work of a Father's loving hand, is what we mean when we speak of the love of flowers. Many cultivate flowers from a desire to excel their neighbors, or as an evidence of their refinement and culture, who know nothing of the absorbing love that causes a man almost involuntary to raise the hat and bow the head in the presence of so much heaven-lent loveliness. This love of flowers is confined to no age or station: we see it in the prince and peasant, it is shown by the aged father, tottering near the grave, who seems almost to adore the fragrant flower in his button-hole, and by the little ones, who, with childish glee, search the meadows for the dandelions of early spring. The love of flowers, we fancy, is the most pure and absorbing with the young. The innocent and pure can love the pure flowers, we think, with an earnestness and devotion unknown to some of us that are older.—*Vick's Floral Guide*.

An obligation is sacred. How careful then should every one be in incurring an obligation, but when once incurred promptness and punctuality should be practiced at all hazards and at whatever cost. Pay as you go, and make money before you spend it will render the fulfillment of obligations easy, and save a wonderful sight of abuse, of secret ill-feeling, and a continual poking of one's nose into other people's business. Our industries must be worked up. There is no use in talking about peace and happiness and prosperity until this way of living from hand to mouth is put an end to.

KEEPING EGGS.

An agricultural paper published at Ontario, Canada, recently offered a prize for the best plan by which "to keep eggs over winter." The following took the first prize: "Whatever excludes the air prevents the decay of the egg. What I have found to be the most successful method of doing so is to place a small quantity of salt butter in the palm of the left hand and turn the egg round in it, so that every pore of the shell is closed; then dry a sufficient quantity of bran in an oven, (be sure you have the bran well dried, or it will rust). Then pack them with the small ends down, a layer of bran and another of eggs, until your box is full; then place in a cool, dry place. If done when new laid, they will retain the sweet milk and curd of a new laid egg for at least eight or ten months. Any oil will do, but salt butter never becomes rancid, and a very small quantity of butter will do for a very large quantity of eggs. To insure freshness I rub them when gathered in from the nest; then pack when there is a sufficient quantity."

An unsuccessful competitor says: "I have tried several experiments, but find none to answer so well as the following: I have kept eggs for two years, and found them perfectly good when used: Two pounds coarse salt boiled ten minutes in one gallon rain water; pour off into an earthen jar; when nearly cold, stir in five tablespoons of quicklime; let it stand till next day; then put in the eggs and keep them tightly covered until wanted for use."

In the list of the plans competing for the prize we notice that all depend upon the exclusion of air by grease, salt water or loose packing, and no doubt this is the most important point, the agent not being very material. A majority of them seem to place great stress upon packing the eggs away with the *small* end down. We should be glad to have the experience of any of our readers upon the point.—*Farmer's Friend*.

SHEEP IN VIRGINIA.

A correspondent in Culpeper county, Va., in a private note, says on this subject:

"As to sheep, I never lose an opportunity to tell my people that they are the lever that is to raise this country to the highest state of prosperity. Many are beginning to see the great advantage of them, and more farmers are keeping them than formerly. Flocks are springing up here and there all over the country. When we begin to appreciate the great service sheep are to do us, away goes the dog, and we will have an effective if not a popular dog law. Here lies the great trouble—the dog. But let two-thirds of us keep sheep, be it ever so few, and then we can in a measure overcome the dogs."

HORSES VS. MULES.—Much has been said in agricultural papers about the advantage of mules. I have raised some of the best I ever saw, and have had some means of comparing them with the horse. It is very true that the mule will climb a steep hill, if it is free from mud, with a bigger load according to his weight than a horse. It is true that he will rough it through a hard winter better than a horse, and it may be also that he is less liable to disease than a horse, but he is slow and lacks spirit. In deep mud he is almost worthless.

He seems to have but little power to draw his feet out of sticky soil, and the exertion tires him and he loses heart. In a slough where the spirit of the horse prompts him to a gallant struggle to regain the solid ground, the mule gives up and lies contentedly down in the mud. Of course some mules are worse than others in this respect, but none are equal in mud to the most average horse.

For very hard, heavy work, where there is no mud, the mule will always be valuable, but as long as it remains true that time is money we must prefer the horse to the mule.

The rage for mules commenced in the United States about seventy-five years ago, and has been revived at different periods since; but the horse still continues to bear sway, and falsify the oft-repeated predictions made many years ago that the mule would eventually supersede the horse in the general work of the farm. For heavy hauling and rough usage on the hard streets of cities, I have no doubt but that the mule is the most economical. For this sort of work there is a demand for him, and he may be raised for the market with profit; but it is simple folly for any one now, after seventy-five years of experience with mules in the United States to talk about their taking the place of horses.—*Cor. Iowa Fine Stock Gazette.*

NOT THE HIGHEST PRICED BEEF.—Mr. Calvin Fletcher, traveling in Europe, writes the *Indian Farmer*, an interesting letter concerning his wanderings in Scotland. He says: "Much to my astonishment I found that Short-horns always stand second in price per pound to three or four kinds of cattle. I have the market reports of twenty best centres of the trade for several months in succession, and in no instance do the Short-horns stand first. None of the above goes to prove that the profit to the raiser of beef is more or less in any particular case or breed. Were I not too old to be inspired to experiment, I think I should decide some questions that have arisen in my mind on this subject."

GERMANY, alarmed at the great number of her people emigrating to other countries, is trying to devise means to prevent the exodus. One means suggested is to prohibit the enlistment of emigrants on foreign account by the payment of premiums. Another and far more sensible suggestion is to facilitate the acquirement of small estates at home.

THE MELON CROP.

A large proportion of the melons which are needed to supply the markets of New York and Boston, are said to have come from a single county in Maryland. The first lots of this fruit are grown as far south even as Georgia; but after the melon season fairly sets in, the supply is principally drawn from Anne Arundel county, Maryland. It is estimated, says the *Advertiser*, that the crop will be larger than ever before, something over 2,500 acres having been planted, from which the yield will probably be upwards of 2,500,000 melons. The varieties mostly cultivated are the Gypsies, Georgians, Taylor-Grays and Mountain-Sweets, the first named being the favorite with dealers in this city and New York, as they will retain a bright and fresh appearance for a week after being picked. The farmers usually ship their melons to Baltimore in pungies, and it is no unusual sight at this season of the year to see three or four score of these vessels lying at a single wharf in that city, all loaded to the water's edge with this often abused but delicious fruit. The season may now be said to be at its height, as the Maryland fruit begins to appear in the markets by July 25, while the crop is exhausted by the first of September. The producer gets about ten dollars a hundred for good sound fruit, and realizes a handsome profit at this price—so handsome, indeed, that melon culture on an extensive scale is rapidly spreading northward into New Jersey. The effect of this movement will be to lengthen the season somewhat, and to lower the price of the fruit—for both of which results the public will be grateful.

WHERE THE MONEY GOES TO.

Some people cannot understand why it is that the residents of the Southern States are so crippled, financially. Let them ponder over two facts, and then they will see more clearly. Georgia alone paid \$24,000,000 for grain, meat, flour, meal, horses and mules, in 1873, and Alabama about \$18,000,000. That's what went with the money. It will not be so again. The amount this year has already been reduced in Georgia to about \$10,000,000, and in Alabama to \$8,000,000, and but for the meat, neither State will have occasion to spend more than \$5,000,000 for subsistence next year.—*Mobile Graphic*.

The following experiment is vouched for by the *Kansas Farmer* as coming from a good and reliable farmer. As showing the relative value of corn and wheat for fattening hogs, it is valuable: He took one hundred hogs and put them in pens and fed corn, and fifty and fed wheat, with the following result: the fifty with corn made eleven pounds per bushel; the fifty with wheat made seventeen pounds of good solid pork per bushel of wheat. The wheat was ground like meal, boiling water poured over it, and then let stand forty-two hours.

WHY MANURE CORN IN THE HILL?

We have seldom seen any soil where, in addition, a little stimulus was not needed in the corn hill, and could be used to great advantage. A crop of corn often depends absolutely on this early driving ahead. With our very late spring weather and sometimes early frosts in the fall, corn is kept busy. There is no crop, which so requires forcing from first to last. The small fibres of the first germination cannot stretch far, and they need, at once, concentrated and active plant food. After feeding on this, which causes them to take root vigorously downward and spring up strong, then the roots can and do spread, and the broadcast manuring comes in to support and make the crops. We have known cases, as suggested by our correspondent, where a fertilizer was applied only in the hill, causing a check afterwards to vigorous growth, and consequent stunting, so that the crop in maturing, very far from realized the promise in the beginning. Corn has been properly called the "hog crop," a voracious feeder, and we have very seldom seen any manuring too great for it.—*Practical Farmer*.

KEEP THEM FAT.—A practical farmer, in communicating his views in the columns of our exchanges, says :

Keep your hogs fat ; the good farmer gives all his young stock a good fat start in life ; because he knows it always takes twice or thrice as much to feed a poor horse, cow, or hog, as it does one in good condition. It ought never to be necessary to keep "killing hogs" in the "fattening pen" longer than a week or ten days—just long enough to harden their fat with corn. The hogs ought to be fat to begin with. In fact, the good farmer never has a poor animal of any kind on his place. It pays well to push young pigs from the word "go"—that is, as soon as they are able to crack corn. We knew once a litter of thirteen half Berkshires dropped in February that, under this plan, without going into the fattening pen at all, eleven months later averaged 175 pounds net meat—total 2,276 pounds ; and the heaviest one was a "runt" at the start.

GOOD ADVICE.

If you cannot speak well of your neighbors, do not speak of them at all. A cross neighbor may be made a kind one by kind treatment. The true way to be happy is to make others happy. To do good is a luxury. If you are not wiser and better at the end of the day, that day is lost. Practice kindness, even if it be but little each day. Learn to control your temper and your words. Say nothing behind one's back, that you would not say to his face.

Poland starch is a fine cement for pasting layers of paper or fancy articles. To clean bed-ticks, however badly soiled, apply Poland starch by rubbing it on thick with a wet cloth. Place it in the sun, and when dry rub it with the hands. Repeat it, if necessary. The soiled part will be clean as new.—*Montville*.

[For the Southern Planter and Farmer.]

BATH COUNTY.

This county is seldom alluded to in agricultural journals, and has been overlooked by those in search of new homes. Lands are cheap, very productive, and many desirable places are offered for sale at reasonable prices.

So far the seasons have been unpropitious. No rain for nearly four weeks, and until the last five days we have had frost every morning. The mountains in every direction have been on fire, and much valuable timber and fencing have been destroyed.

The grass crop, which is the principal reliance, will be very short. Do your readers cure clover hay with lime? It is the customary method here. It can be stacked—or put in a mow, which is better—immediately after cutting, if one gallon of air-slacked lime is sprinkled over every four-horse load as it is put up. No one, however, should attempt to save clover hay without putting it under shelter. Timothy or any other hay can be saved in the same manner. If the farmers generally would adopt this plan they would prefer it, even if they could be assured that they would have a plenty of sunshine. There must be no dew or rain on it, which is the only precaution necessary.

A REMARKABLE SHEEP.

The proprietor of the Warm Springs has a remarkable ewe. On the 22d April, 1874, it had four lambs; two were raised by hand, and the other two she raised. On the 5th of November, same year, she had two more, which she raised and are now nearly full grown. And on the 15th of the present month she had two more, which can now be seen with her, and are very lively; making eight lambs in twelve months and twenty-three days. Who can beat it?

But this letter is already too long to be read.

Warm Springs, Bath Co., Va., May 25, 1875.

FARMER.

[For the Southern Planter and Farmer.]

BEAR-SWAMP GRANGE.

At a meeting of Bear-Swamp Grange, No. 128, held in their hall April 3, 1875, on motion of Thomas H. Bossieau, Esq., the following preamble and resolutions were adopted, and requested to be sent you for publication:

Whereas, we as a part of an organization known as the Patrons of Husbandry, which was organized to war upon no class of those engaged in the other necessary callings of the country; but to protect ourselves from unjust legislation and speculation, and thereby to enjoy an equitable share of the advantages incident to wholesome laws and well-directed mercantile and agricultural pursuits; and, *whereas*, in our judgment to embarrass the legitimate mercantile business of any portion of the country, will most assuredly improv-

erish the agricultural interest; and, whereas, to concentrate our trade in any given direction, through unnecessary agents, is contrary to the spirit of the organization, and therefore fatal to its existence: Therefore, be it

Resolved, 1. That we instruct our delegates, who may hereafter represent us in the District Grange, to give the vote of this Grange in opposition to unnecessary haste in the recommendation of a suitable person as an agent of the District Grange to which we belong.

2. That in the event it becomes necessary to recommend an agent, that his qualifications should be, among others, a fourth degree member of the Order of Patrons of Husbandry, and whose interest in farming is paramount.

3. That the duty of the agent should be set forth and so guarded as not to infringe upon any legitimate and necessary interest or to embarrass the same.

4. That the secretary transmit a copy of these resolutions to the Petersburg Rural Messenger, Virginia Patron, and Southern Planter and Farmer, with the request that they publish the same.

J. H. PURSELL, Secretary.

Ford's Depot, Va., April 6, 1875.

Editorial Department.

NOTES FOR THE MONTH.

We endeavor to make our "Notes for the Month" practical and useful, and wish our readers to understand that they are not written merely to fill up space. We shall endeavor hereafter to make them, if we can, more useful and instructive, and hope they will constitute an attractive feature in our journal. Whatever concerns the farmers concerns us, in a double sense; for, besides being our patrons, we are one of them in our calling. And while not professing to any great skill in agriculture, we have almost daily opportunities of consulting very experienced farmers, and getting their advice and instruction. While the farmers are our patrons we look upon them in some degree as our *protégés*, for we endeavor, to the best of our ability, to protect their interest.

Well, this is *Madam Juno's* month, and while having no evidence that she was a Patron of Husbandry, we have reason to know that, like the rest of the fair sex, she was a great admirer of flowers, whose myriads of blooms crown this month of June; for we are told by Homer that she wore "a crown beset with roses and lilies."

But to the work for the month. The season thus far has not been

propitious, and no doubt the cold and backward season has militated very much against the timely planting of corn and retarded its growth. Where corn was planted early, the corn has no doubt rotted much in the ground, and much replanting has been necessary. There is still time to make a good crop if thorough cultivation be practiced, and it is not yet too late to manure around the plant in the poorer parts of the field. These additional items of labor must, however, detract from the profits. Where corn has yet to be put in, as may be the case on cold, wet lands, a quick growing variety, such as is used in Canada and the Northern States, must be selected to plant.

The winter oat promises well. Spring oat badly; so of the hay crop. Wheat is said to be generally promising, and not materially injured by the cold weather. Tobacco plants in some localities were badly killed, but in most places not seriously injured; though the fly is said to be destroying many plants now, and the cool, dry weather in the month of May prevented their growing out of the way of the fly. Is there no remedy for this fly? Have any of our planters tried "Paris Green"?

The suggestion has been made to raise tobacco plants under glass, and we hope it will be tried another year. The glass would probably not cost more than getting up and burning the plant beds, which requires a great amount of wood. Then the glass sash would protect the plants in a great measure from the fly, and if necessary the plants could be forced by manure at the bottom of the plant beds. These sash can be ordered in Richmond in any quantity, or any carpenter can prepare them in the country with a few simple directions.

CORN must be replanted as soon as thoroughly up. Where it is not yet done, we advise the replanting to be done with some forward corn—"Canada Flint," or long yellow corn—unless it is designed to keep the kind already planted free from admixture for seed corn. By planting the earlier corn, there is time to make good ears, and the tassel comes out in time to furnish pollen for the main crop in case of drought, which sometimes withers the tassel before it has impregnated the ear. Corn must be kept thoroughly stirred, and the grass killed as often as it puts up. We are trying on a portion of corn this year, the fine, long-tooth cultivator, frequently run in the row, and design to use it exclusively on a portion of the field, and compare the result with the old mould-board system. The cultivator keeps the ground soft and well pulverized, and kills the weeds, and seems thus far to answer a good purpose. It may, when the corn gets

larger, injure the roots, but as it is the expanding cultivator it can be narrowed so as not to run too near the corn, and by withholding pressure may be run less deep.

ROOT CROPS—The first of June is the time to sow mangold wurtzel, sugar beet, and ruta бага. They do better sowed the last of May, but will yield well if put in between the 1st and 10th of June. Mangolds yield better than the sugar beet, but the latter contains more sugar and is more nutritious, and is of finer texture, and is eaten more eagerly by stock than the former. The ruta бага is uncertain in our experience and difficult to raise. For all three, the soil should be made rich, plowed deep, and be thoroughly prepared. Lay off in drills from 28 to 30 inches apart: scatter along well rotted stable manure, or some reliable fertilizer. Then cover with two furrows of the plow, which leaves a ridge, that must be broken down and left flat. On this drill the seed. As soon as they come up dust over with ashes and soot, to protect from the fly, and at the first and second workings sprinkle over the entire surface a few bushels of refuse salt or kainit. Thin out to eight inches, and keep the ground well worked with the double wing coulter and cultivator, the former being the best for the first working, particularly if the ground should be baked and hard. The ruta бага requires a deep, rich, sandy loam if it can be had, and if not, that which is nearest to it in quality. The "roots" come in admirably for winter feeding, though in our climate they are not very certain, and will not generally yield, we think, as much as if the land were sown in corn or millet, taking into calculation the cost of production, and that, particularly, if the same labor and manure were applied to a larger surface for the corn and millet.

CORN AND MILLET AND SORGHUM should be sown this month, if not already in the ground. The land should be rich and thoroughly prepared. The corn and sorghum should be drilled, and the millet sown broadcast. Sorghum is particularly useful for hogs, and may be cut twice in the season if sown early. It makes also good winter forage if cut before the stalk is hard and glazed. Stock prefer it to corn fodder, and no doubt it is more nutritious. If some is suffered to go to seed it makes good grain for fowls.

CUTTING GRASSES FOR HAY.—All the grasses, and clover, also, should be cut when in blossom; the latter as soon as the first brown heads appear. Great attention should be given to curing, remembering that grasses, and particularly clover, are injured by becoming

too dry. They should be cured with as little sun as is compatible with their keeping. Clover should be salted in putting away, and if there is fear of its not keeping, sprinkle over each load some air-slacked lime, probably about two quarts each of salt and lime to each wagon load.

POTATOES for winter use should be planted as soon as possible, if not done the last of May. The ground should be manured broadcast with good stable manure, or coal ashes, or kainit. Potash is an important fertilizer for this crop, and we have found coal ashes (not too coarse), either broadcast or in the drill, to be as good as stable manure. We once tried coal ashes in the drill alongside stable manure in the drill, and found the former to produce at least as well as the latter. Never cut the potato when planted at this season.

KILLING GRASS AND WEEDS.—This is the month for killing grass, and hence no doubt has arisen the saying of “a dry June for corn,” as dry weather enables us to kill the grass. An experienced trucker in the vicinity of Richmond informs us that even *wire grass* may be killed effectually in this month by repeated plowings.

INSECTS must be followed up this month also. The striped bugs upon melons, cucumbers, and other vines must be killed early in the morning, and soot or fine tobacco, which may be gotten at the factories, sprinkled over the plants. This fine tobacco, principally obtained in the manufacture of snuff, must also be sprinkled over the plant beds of cabbage.

We stated in “Notes” for May that cabbage seed for winter use should be sowed the middle of May. We are since informed by some of our experienced truckers around the city that they should be sown between the 1st and 6th of May.

So June is a busy month too; no holiday yet for the farmer. He must press on; work his corn and tobacco, and cut his hay, and work potatoes, melons, cucumbers, cymplings, and vegetables generally, fight the weeds and insects, keep the ground well stirred and mellow. When the hay and wheat and oat harvest is over and the corn laid by, we may consent that our *protégés* shall take some relaxation, and probably a trip to the seaside, or to our glorious Virginia mountains. We will see. But our consent cannot be obtained to a trip to Northern watering places and Northern cities. This money must be kept within the borders of our impoverished old mother. Too much has already, in times past, been squandered in pleasure trips to Northern towns and bathing places, and Saratoga, &c.

THE VIRGINIA PATRON.

Our May number contained a courteous and respectful criticism on the action of the Master of the State Grange, in selecting only one paper as the medium through which *he* would officially communicate with the members of the Order. The State Grange having referred the entire subject to the Executive Committee, and they having decided that it was inexpedient to have any regular medium, for the reason that every agricultural paper in the State was friendly to our Order, and were willing to publish whatever the grange interest required; we thought, and still think that the Master had overstepped the limit of his authority, and used his official influence in direct opposition to the judgment and decision of the Executive Committee.

In confirmation of our position, we published letters from brothers Moore and Ragland, who were present when this action was taken. These letters the *Virginia Patron* has omitted to publish in commenting upon our criticism, but simply referred to them as "irresponsible persons," when in fact, they as members of the Executive Committee, shared with the other members the entire responsibility of deciding this matter.

The *Patron* farther says: "It seems somewhat singular that Dr. Dickinson, who is not a member of the Grange, should undertake to expound the constitution to the highest official in the State."

We made no preterensions to expounding "the constitution" to any one, but simply stated the fact that the Master had assumed the authority to disregard the action of the Executive Committee. This is the whole question at issue. But the editor of the *Patron* says we are "not a member of the Grange," which statement he has seen fit to reiterate in several issues of his paper. We supposed we were "a member of the Grange," as we had received all the four degrees of the Order from Grange No. 16, of which the editor of the *Patron* is Master, and who has given us a withdrawal card, signed by himself as Master, stating that we were in "good standing," &c., for the purpose of joining a more convenient Grange, which card has been deposited with Grange No. 186. What plea can he have for such misrepresentations with such personal knowledge of the facts?

The editor of the *Patron* disregarding all the facts in the case, and making it a personal matter with himself, devotes at least three columns to a personal attack upon us, evincing throughout an unmitigated malignity, expressed in the most scurrilous language, not hesitating to

make statements which he knew were false and indeed without the slightest foundation in fact. We do not propose to bandy epithets with the Editor of the *Patron*, nor do we propose to continue this discussion any farther with him, as he has persistently misrepresented us in every thing he has published on this subject.

If we have wronged the Master, or any other officer or member of the Order, we are ready at all times through our columns to make such reparation as justice and fraternal feeling requires.

In conclusion, we still think our reference to the matter was proper and appropriate, and we will hereafter express our views on measures which we think will be for the good of the Order, "without fear, favor or affection," regardless of the malevolent attacks of the editor of the *Patron*.

ANOTHER OLD VIRGINIAN GONE.—The death of Col. Hill Carter, of Shirley, is announced in the secular papers. There was no more strongly-marked character in Virginia than this lamented gentleman. Of the best Virginia stock, he inherited ample fortune and the highest social position. But, without these advantages, he would have made his mark. A more resolute man never lived, nor one more loyal to country and friends.

Col. Carter was one of the best and most enthusiastic farmers in the State, and a regular correspondent to the *Planter and Farmer*.

PROF. J. W. MALLET.—We are indebted to Prof. J. W. Mallet, of the University of Virginia, for a catalogue of the department of *Industrial Chemistry*, civil and mining engineering, and agriculture.

It will be remembered that the late Samuel Miller, of Lynchburg, gave a hundred thousand dollars in trust for the establishment of a department of this kind, which bequest is being carried out under the direction of Dr. Page and Prof. Mallet. We are glad to know it is likely to prove a great success.

Major John D. Rogers, in a private letter, says:

"Our season has been any thing but advantageous to we farmers, but we can but submit to God's will and make the best of it. Our fruit is much less injured in this section than was supposed by the murmurers; but corn planting and gardening very backward, some of our early planting having to be furrowed out and re-planted. Our county is plethoric in candidates for county offices, and will remain so until after 27th May."

MESSRS. ALLISON & ADDISON, have kindly furnished us with a condensed resumé of the essay on the *Cow Pea*, written by the lamented Edmund Ruffin. We doubt very much if any man knew more of this subject than did Mr. Ruffin, and Messrs. Allison & Addison have very well brought out all of general interest that he wrote, without giving the details which made the essay somewhat too long for our columns. Messrs. Allison & Addison have a fund of valuable information on this and kindred subjects, which they will furnish *gratis* to those who desire such information.

MR. WM. JAMES WALTON, Louisa county, Va., has just sold eight hogsheads of tobacco (a portion of his crop) in this city, at an average of \$25 per hundred. He is the most successful grower of tobacco in that county, and says he makes more money now than he did before the war. We will publish in our next issue an article from him on his method of cultivation, &c.

EDITOR PLANTER AND FARMER,—In the April number of your journal you published an article on the culture of broom corn. Several typographical errors crept in. Will you make the following corrections? For “eight or ten *bushels*” read “eight or ten *barrels*.” For “up to this *much*,” read “up to this *mark*.” For “*bush*,” read “*brush*” passim.

The Southern Magazine, published by Turnbull & Brother, of Baltimore, is in every way worthy of the patronage of our people. In point of literary merit, and especially its adaptation to Southern taste, it is decidedly the most successful enterprise of the kind ever undertaken by a Southern publisher. Every number is full of choice reading matter, and as it is the organ of the Southern Historical Society, it contains much that is especially interesting to those who take an interest in the details of the recent conflict between the sections.

MR. SAMUEL AYRES of this city, is the inventor and manufacturer of a truss that is highly recommended by the medical faculty. Mr. Ayres is a reliable business man, and will give satisfaction to those who deal with him. Persons wishing trusses will do well to correspond with him.

WE had occasion recently to visit the NURSERY of MR. L. HARVEY, on the Brook road near the city, and were very much gratified at the splendid appearance of all his surroundings. No where south of the Potomac can such a variety of choice ornamental trees and plants be found, and the excellent cultivation they receive keeps them in the thriftiest condition. Mr. Harvey deserves credit for the wonderful improvement he has made in the few years he has occupied the place, and for the energy and skill he exhibits in its cultivation. Our people ought to pay more attention to ornamental planting, and we think a visit to Mr. Harvey's would convince them of it.

WE are under obligations to MR. JOHN SAUL, of Washington, D. C., for a box of flowers, consisting of every variety of bedding plants. These came by express, and were so carefully packed, that after three days they were opened and found just as fresh as if just out of the green-house. They were set out in the open ground, and, with one or two exceptions, are living and give promise of great beauty.

MR. PETER HENDERSON, of New York, has also sent us a basket of flowers, which arrived in excellent condition, and are growing finely.

We wish to impress upon our readers the fact, that for a few dollars they can have delivered at their door, either by mail or express any variety of the most choice plants grown by either of these gentlemen; and no one in the United States offers a greater variety, just as fresh and as sure to live as if taken by hand from the green-house and planted at once in the ground. Beautify your homes! No investment pays so well, especially where children are growing up. Flowers exercise a refining influence, which will last through life.

The Manhattan Life Insurance Company, of New York, is an established and reliable company; and as it is the recognized duty of every man who has a family to provide for them in case of his death, it would be well for our readers to consider, in this connection, the subject of life insurance, and look into the merits of this company. The General Richmond Agent of this company is too well and favorably known to need any commendation from us.

Our little boys should look at the advertisement of Georgie Payne, and send for a pair of fancy rabbits.

MR. C. T. PALMER offers to our farmers the *Valley Chief* Reaper and Mower. When we find an implement combining every excellence, manufactured at our very door, economy and patriotism should induce us to use it. Mr. Palmer's business, we are glad to know, is rapidly increasing, and we hope that he will soon have to increase his already extensive facilities for the manufacture of machines.

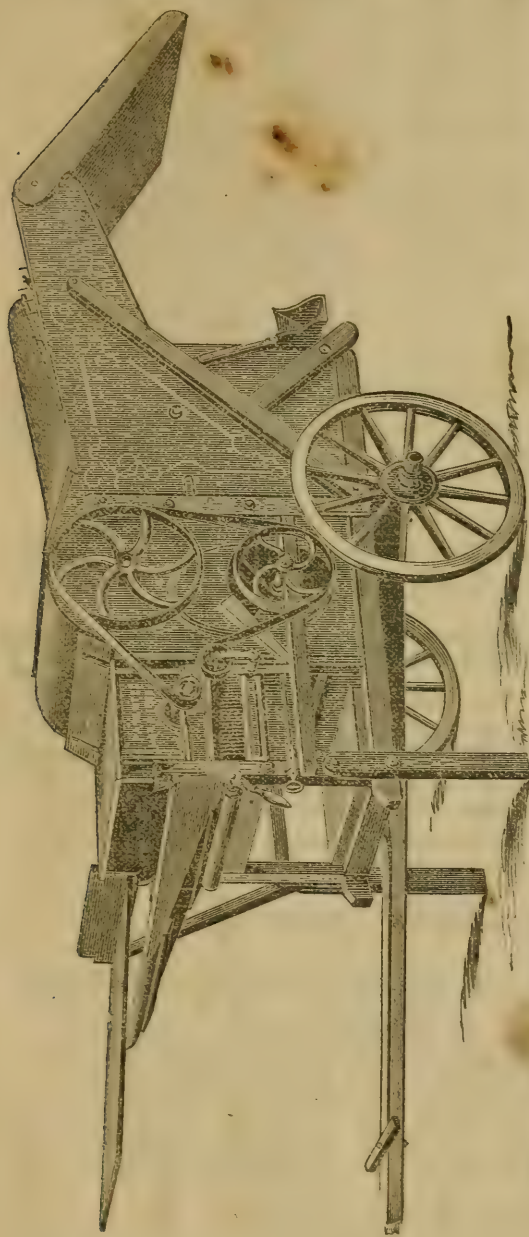
We take pleasure in recommending the *Maltby House*, Baltimore, to our readers. Situated in the business centre of the city, it offers every accommodation one could desire on the most reasonable terms. The proprietor and employees all devote themselves to the comfort of their guests, and we have found it one of the most agreeable places we have ever stopped at.

THE ST. JAMES HOTEL.—This is a new and elegant hotel, situated in the heart of the city, fronting on the Capitol Square. It is fitted up in elegant and convenient style, with all the modern improvements. The proprietor, Mr. Hoenniger, and the veteran hotel-keeper J. P. Ballard, his assistant, know how to run a hotel perfectly. The accommodations are first-class in every particular, and the charges moderate.

ASHES FOR ORCHARDS.—The *Scientific American* says: "The point to which we now call attention is, that our farmers and fruit-growers have ignored, or rather have been ignorant of, the importance of wood ashes as a vegetable stimulant and as the leading constituent of plants. Even coal ashes, now thrown away as useless, have been shown both by experiment and analysis to possess a fair share of alkaline value. We will relate only one experiment: Some twenty-five years ago we treated an old hollow pippin apple tree as follows: The hollow, to the height of eight feet, was filled and rammed with a compost of wood ashes, garden mold and a little waste lime (carbonate). The filling was securely fastened in by boards. The next year the crop of sound fruit was sixteen bushels from an old shell of a tree that had borne nothing of any account for some time, and for seventeen years after filling, the old pippin tree continued to flourish and bear well."

William Saunders, who has charge of the public grounds at Washington, gives the following as a remedy which he has found effectual for pear blight. It is cheap, and should be tried: To half a bushel of lime add four pounds of sulphur; slake to the consistency of whitewash, and when it is applied add to each gallon of the wash half an ounce of carbolic acid. Apply this to the diseased parts. Where the bark is diseased, remove the outer portion before making the application.

CARDWELL'S THRESHER AND CLEANER.



We are manufacturing the above Thresher and Cleaner or Separator, and can recommend it as the simplest and best in the market, being specially suited to the wants of the farmers of the South and Southwestern States. We have added many late improvements that materially increase its efficiency and satisfactory working, and we are confident of giving satisfaction to all in want of such machinery. We mount our Thresher on either 2 or 4 wheels, and the prices include the mounting. Price \$200 to \$300, according to size. We also make Horse Powers, either mounted or not, as may be desired.

J. W. CARDWELL & CO.,
1511 to 1521 Cary Street, Richmond, Va.

J. W. VESTAL'S DOLLAR COLLECTIONS of PLANTS for 1875.

We will send any one of the following collections of plants by express, no charges for boxing or packing; or by mail, post paid. (Larger plants can always be sent by express.) Plants guaranteed to reach their destination to any point in the United States or Canadas, secure from heat or frost at all seasons, on the receipt of ONE DOLLAR, upon the following conditions:

1st. The different varieties to be entirely our selection.

2d. That orders simply name the number of the collection and date of this list. A detailed list of plants not being necessary.

3. That no request be made for changes in any collection at these low rates. All who wish to select their own plants can do so at the prices per single plant in our descriptive catalogue, which will be furnished gratis to all who apply.

No. 1.—Eight Roses, profuse flowering sorts.

No. 2.—Ten Zonale double scented and variegated Geraniums.

No. 3.—Ten Fuchsias double and single, distinct colors.

No. 4.—Ten Coleus, distinct sorts.

No. 5.—Twelve Basket plants, 12 varieties.

No. 6.—Twenty Verbenas, distinct colors.

No. 7.—Eight Dahlias, large and Pompones, flowering.

No. 8.—Eight Carnations, perpetual flowering sorts.

No. 9.—Four Roses, 10 Verbenas.

No. 10.—Two Roses, 3 Verbenas, 3 Geraniums, 3 Fuchsias.

No. 11.—Two Roses, 5 Verbenas, 4 Geraniums, 2 Lantanas.

No. 12.—Three Geraniums, 1 Fuchsia, 1 Heliotrope, 1 Lantana, 1 Salvia, 1 Cuphea, 1 Lemon Verbena, 1 Carnation.

No. 13.—One Tricolored Geranium, 2 Fuchsias, 2 Salvias, 1 Cuphea, 2 Double Violet, 2 Coleus, 1 Double Petunia.

No. 14.—One Rose, 1 Verbena, 1 Geranium, 2 Fuchsias, 1 Coleus, 1 Carnation, 1 Dahlia, 1 Heliotrope, 1 Salvia.

No. 15.—One Tuberose, 1 Double Violet, 1 Petunia, 1 Salvia, 1 Musk Plant, 1 Lemon Verbena, 1 Cuphea, 1 Gladiolus, 1 Begonia, 1 Bouvardia.

No. 16.—One Petunia, 1 Lantana, 1 Ageratum, 2 Ruebia, Formosa, 1 Tuberose, 1 Lobelia, 1 Rose, 1 Salvia, 1 Gladiolus.

No. 17.—One Caladium Esculentum, 1 Alternanthera, 1 Coleus, 1 Achyranthus, 1 Koniga, var., 1 Canna, 1 var. Balm, 1 Pyrethrum Golden Feather, 1 Variegated Geranium, 1 Striped Verbena.

No. 18.—To any one remitting (\$15.00) fifteen dollars at one time, we will send the whole of the above 17 collections to one address, varying the plants that no two will be alike.

No. 19.—Or to any one sending us a club of not less than ten of the above collections, and remitting the full price for each, we will send any one of the above as a premium, and mail or express the plants separately to each member, provided not less than one collection goes to each.

Address,

JOSEPH W. VESTAL,
Cambridge City, Indiana.

june

MANHATTAN Life Insurance Company OF NEW YORK.

<i>Assets January 1st, 1875,</i>	-	-	\$9,690,750 48
<i>Undivided Surplus,</i>	-	-	1,808,329 22

All its policies are incontestable, and non-forfeitable from
the second year.

Dividends Annually.

**\$5,500,000 Paid in Losses during Twenty-Four Years,
and no Claims Unpaid.**

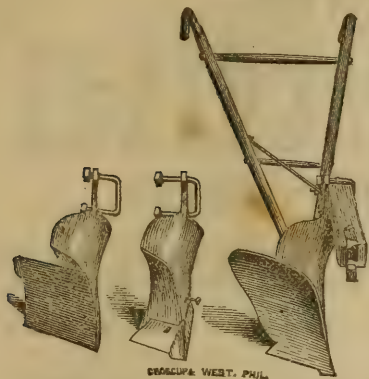
Premiums may be paid Annually, Semi-Annually, or Quarterly, as
best suits the convenience of the policy-holder.

J. ADAIR PLEASANTS, General Agent.	P. T. MOORE, Agent City of Richmond.
--	--

OFFICE: 1200 MAIN STREET, UNDER PLANTERS NAT. BANK.

THE WATT PLOW

VICTORIOUS ON EVERY FIELD!



A combined TURNING PLOW, CULTIVATOR, SUBSOILER, ROW-OPENER, PEANUT-DIGGER, TOBACCO and COTTON SCRAPER and SWEEP.

No CHOKING when bright and smooth; no LABOR to the plowman; ONE-THIRD LESS DRAUGHT to the team; thorough BURIAL of Weeds, Grass, &c.; great STRENGTH, Durability and Economy in its use, and complete pulverization of the soil.

FARMERS WHO USE IT WILL USE NO OTHER.

Awarded all the Premiums at every Fair attended in 1873.

Awarded first Premiums at every Fair attended in 1874.

Virginia State Fair, Richmond—FIRST PREMIUMS ON THREE AND FOUR-HORSE PLOWS.

Right and Left Hand—ALL PREMIUMS AWARDED THEIR SIZES.

Also at the Plowing Match ALL PREMIUMS AWARDED WHITE PLOWMEN were taken with WATT PLOWS of ONE, TWO, THREE and FOUR-HORSE SIZES; and COLORED PLOWMAN by ONE, TWO and THREE-HORSE SIZES; being

SEVEN PREMIUMS OUT OF EIGHT.

The superior work done by the WATT, and the complete ease with which it is handled, was apparent to all.

NORTH CAROLINA STATE FAIR, Raleigh, October 10th;

GEORGIA STATE FAIR, Atlanta, October 19th;

SOUTH CAROLINA STATE FAIR, Columbia, November 10th;

STAUNTON, VA., October 13th;

LYNCHBURG, October 20th;

WELDON, N. C., October 20th;

ORANGEBURG, S. C., November 3rd;

CHARLOTTE, N. C., November 3rd;

DANVILLE, VA., November 3rd;

POINT PLEASANT, W. VA., October.

Thus, with its great reputation before, it has gained new laurels this year, which must convince every farmer of its vast superiority over other plows.

We warrant every plow sold to be as represented or to be returned to us. We solicit a trial. Catalogues sent to any address.

WATT & CALL,

SOLE MANUFACTURERS,

1452 Franklin St., Richmond, Va.

Special Agents for "The Best" Spring-Tooth Horse-Rake and Gleaner; also for sale of our own manufacture. HARROWS, CULTIVATORS, and all kinds of IMPLEMENTS at lowest prices—all warranted.

BURDETT ORGAN.

I have a NEW BURDETT ORGAN which I will sell for \$150—Manufacturer's price \$175—Boxed and delivered at any Depot or Wharf in Baltimore. Terms of payment accommodating.

L. R. DICKINSON.

Also, THREE FIRST-CLASS SEWING MACHINES which will be sold at a discount of *forty per cent.* on Manufacturers' prices.

THE IMPROVED WHITNEY SEWING MACHINES, PATERSON, NEW JERSEY.

Sold Direct from the Factory at GREATLY REDUCED PRICES.



Paid. July 25, 1871.

ENDORSEMENT OF EXECUTIVE COMMITTEE
OF INDIANA.

After a thorough examination and test of the Improved Whitney Sewing Machine, we find it simple and durable in its construction, the material and workmanship first-class. The machine runs exceedingly light, and at a high rate of speed. It is capable and will do all varieties of family sewing in a

superior manner. We heartily recommend the Improved Whitney Sewing Machine to members of our Order requiring a modern and reliable sewing machine. By referring to our national executive circular we find that the Whitney Mfg. Co., through C. G. Akam, was the first standard sewing machine to make a national proposition to members of our Order, and we trust Patrons will give them the liberal support they justly deserve.—J. Q. A. Newsam, John F. Hall, Robt. Mitchell, Anson B. Line, R. C. McWilliams, Lindal Smith.

I hereby certify that the above is a true copy of the action of the committee
M. M. MOODY, *Sec'y Indiana State Grange.*

The Whitney Sewing Machine possesses all the requirements of a perfect Family Sewing Machine. It is a perfected Shuttle Lock-Stitch Machine. It is constructed upon sound and well tested mechanical principles. The workmanship is of the highest character. It is adapted to every variety of sewing for family wear from the lightest muslins to the heaviest cloths. It will Hem, Fell, Bind, Cord, Braid, Seam, Tuck, Ruffle, Hem-stitch, Gather and sew on at the same time and will work equally well on Linen, Silk, Woolen and Cotton goods.

Why the Whitney Mfg. Co., are Great Public Benefactors?

Because they are the Pioneers in breaking the combination prices in Sewing Machines, and putting this faithful servant within the reach of all. The Whitney is the best and now the cheapest First-Class Sewing Machine ever offered to the public.

Send for circular giving all particulars,

The Whitney Manufacturing Company,
PATERSON, NEW JERSEY.

POWHATAN RAW BONE

SUPER-PHOSPHATE,

MANUFACTURED BY THE


POWHATAN PHOSPHATE COMPANY,

RICHMOND, VA.

J. G. DOWNWARD, President. JOHN WHANN, Secretary and Treasurer.

To the Planters of Virginia and North Carolina:

We respectfully call the attention of those intending to use fertilizers on their spring crops to the Powhatan Raw Bone Super-phosphate, and particularly those who want a reliable fertilizer for tobacco and cotton, as we intend in the future, as in the past five years, to furnish an article which has no rival, regardless of price. Wherever it has been used by the side of any other fertilizer whatever, not excepting the deservedly popular and higher priced tobacco fertilizers of the day, it has in every case proved itself fully equal.

 Send for Circular.

mar—3m

SOLUBLE PACIFIC GUANO,

FOR TOBACCO, CORN AND OTHER CROPS.

After ten years' continuous use, throughout Virginia and the South, Soluble Pacific Guano has acquired a reputation for reliability equal to that formerly enjoyed by the Peruvian Guano, and the quantity used annually exceeds that of any other fertilizer.

It has been the aim of all connected with this Guano to produce the best possible fertilizer at the lowest possible cost, and we claim that the unusual resources and facilities of the manufacturers have enabled them to approach this more nearly than has been done in any other fertilizer with which we are acquainted. Those who have been using it unite with us in the opinion, that by its use the consumer gets

THE GREATEST BENEFIT FROM THE SMALLEST OUTLAY.

We offer it with great confidence for use on the Tobacco and other crops to be grown in 1875, with the assurance that it is, in all respects, equal to what it has been in the past.

PURE PERUVIAN GUANO,

AS IMPORTED.

We have a full supply of **No. 1 Guanape Peruvian Guano**, from the Government Agent in New York, selected from one of the finest cargoes ever imported. It is dry and in beautiful order, and contains within a fraction of **13 per cent. of Ammonia**, which is within two per cent. of what the old Chincha Peruvian used to contain—in fact, it would be difficult to tell one from the other.

We offer these standard and thoroughly tested fertilizers for Tobacco, Corn, and all Spring Crops, and are prepared to sell them at such prices as will make it to the interest of consumers and dealers to purchase their supplies of us instead of sending their orders to New York, or elsewhere.

For further information and supplies, address,

ALLISON & ADDISON,

mar—tf

Seed and Guano Merchants, Richmond, Va

GRAND OPENING
—OF—
SPRING
—AND—
SUMMER
DRESS GOODS

—AT—
LEVY BROTHERS,
1017 & 1019 Main Street, Richmond, Va.

—O—
ALL THE NOVELTIES OF THE SEASON, COMPRISING
PLAID and INVISIBLE CHECK MOHAIRS,
DUNKIRK MOHAIRS,
MATELASSE SILKS,
STRIPED and CHECKED JAPANESE SILKS,
CHENE MIXTURES,
SILK-WARP PONGEE,
PLAIN PONGEE,
MOHAIR DIAGONALS,
MATALASSE ALPACA,
GRAY MIXTURES,
PRINCESS MIXTURES,
CHECKED and STRIPED SILKS,
PLAIN SILKS, in exquisite shades,
A full line of BLACK GROS-GRAIN SILK.

All of the above goods are offered at prices particularly attractive. The assortment is such as will please the most fastidious. An examination of our stock is respectfully solicited.

LEVY BROTHERS.

A new lot of RED-CHECK MATTING, just received.

ap—1yr

FRESH GARDEN and FIELD SEED

At the old stand of Palmer & Turpin,
1526 Main street, Richmond,
Orchard Grass,
Timothy, Herds, Clover,
Kentucky Blue Grass.
Send for Catalogue.
feb-tf W. H. TURPIN.

ESTABLISHED 1816.

CHAS. SIMON & SONS,
68 NORTH HOWARD ST., BALTIMORE, MD.
Dealers in

FOREIGN & DOMESTIC DRY GOODS,

would call special attention to their splendid stock of Dress Goods, Linen Goods, Embroideries, Laces, and Hosiery; the best assortment of Mourning Goods in the city.

SAMPLES SENT FREE!

All orders amounting to \$20.00 or over, will be sent free of freight charges by Express, but parties whose orders are not accompanied by the money, and having their goods sent C. O. D., must pay for return of the money.



sep—

The above celebrated PLOWS, with the VERTICES Attachment, for adjusting the beam, furnished to farmers and dealers at low rates, and warranted to give satisfaction.

sep—ly

ELLERSLIE FARM.

Thoroughbred HORSES;
Half Bred HORSES;
Pure SHORT HORN CATTLE.
Improved BERKSHIRES
For sale,
Price, \$10 apiece.
Address,
R. J. HANCOCK,
Overton, Albermarle Co., Va.

Daisy, Queen Victoria

Plants of this beautiful flower can now be furnished in large or small quantities. Send for descriptive priced circular, and notices of the press. One plant \$1; ten small plants \$1; free by mail.
A. HANCE & SON,
ap Nurserymen and Florists, Red Bank, N. J.

GRAPE VINES,

Grown especially for the Trade, very fine, and at low prices. CONCORD, HARTFORD, PROLIFIC and MARTHA, in large quantities.
A. HANCE & SON, Nurserymen & Florists,
ap Red Bank, N. J.

Strawberry Plants

By the 100, 1,000, 10,000, or 100,000. Wilson's Albany, Charles Downing, Triomphe de Gand. Also Monarch of the West, Col. Cheney, Boyden's No. 30, Black Defiance, Kentucky, Lanning's White and BROWN'S WONDER, in large quantities.

A. HANCE & SON, Nurserymen & Florists,
ap Red Bank, N. J.

J. Y. BICKNELL,

Westmoreland, Oneida Co., N. Y.,
Won premiums on ALL VARIETIES shown at the New York State Fair last September, viz:
BRAHMAS, Light and Dark,
COCHINS, Partridge and White,
HAMBURGS, Silver Spangled, Golden Spangled and Pencilled, and Black,
DORKINGS, Colored,
HOUDANS, LA FLECHE, GOLDEN POLISH GAMES, Black-breasted Red and Duckwing, GAME BANTAMS, Black-breasted Red and Duckwing,
GOLDEN SEBRIGHT and AFRICAN BANTAMS,
DUCKS, Rouen and Aylesbury,
PIGEONS, all varieties.—All first premiums but four.—FOWLS and EGGS for sale from the same stock. Circulars free.
ap tf

LIME.

20,000 bushels best OYSTER SHELL LIME of my own manufacture, for sale low. I am also Agent for the Cumberland Tobacco Fertilizer, which has given great satisfaction in the Connecticut Valley, also Berry's Superphosphate made exclusively from *Raw Bone*.

GROUND PLASTER, AGRICULTURAL SALT, Building Lime, Hydraulic Cement, Calcined Plaster, &c., constantly on hand at wholesale and retail.

A. S. LEE,
Virginia St., Near Danville Depot.
mar—6m

\$5 to \$20 Per Day at home. Terms free. Address G. STINSON & Co., Portland, Maine. feb—ly

ZELL'S

CELEBRATED

Tobacco Fertilizer.

Prepared expressly for this crop. The most popular Fertilizer in use. For sale by agents and dealers throughout the country.

ZELL'S AMMONIATED BONE SUPER-PHOSPHATE.

Unrivalled for Cotton, Wheat, and all Grain and Root Crops. For sale by agents and dealers throughout the country.

ZELL'S DISSOLVED BONE SUPER-PHOSPHATE.

Supplied to manufacturers and dealers at low figures.

We are prepared to furnish the different Granges with an "Ammoniated Bone Super-Phosphate" of a standard quality, adapted to all crops, at very lowest price.

P. ZELL & SONS,
MANUFACTURERS.

ap—4m

30 South St., Baltimore, Md.

JOHN C. HACHTEL & CO.,

MANUFACTURERS OF

Hachtel's Ammoniated Superphosphate,
Hachtel's Pure Dissolved Bone,
Hachtel's Tobacco Fertilizer

BONE DUST, GENUINE LEOPOLD SHALL KAINIT (German Potash Salts),
MURIATE OF POTASH, BONE MEAL, and FERTILIZING
MATERIALS GENERALLY.

Liberal discount to dealers and others who buy largely for cash.

JOHN C. HACHTEL & CO.,

sep—8t

14 Bowly's Wharf, Baltimore.

FALL STYLES, 1874.

CHARLOTTESVILLE WOOLEN MILLS SAMPLE CARDS

Are now ready for mailing. Our assortment embraces
TWENTY-FOUR PATTERNS.

Merchants desiring samples, will please address,

**CHARLOTTESVILLE WOOLEN MILLS,
CHARLOTTESVILLE, VA.**

IMPORTANT TO FARMERS.

GREAT DOMESTIC INSTITUTION.

Recipe for making Artificial Guano.

No. 1.	Clean Virgin Soil	20 bushels.
" 2.	Wood ashes	3 "
" 3.	Fine Bone Dust.....	3 "
" 4.	Calcined Plaster.....	3 "
" 5.	Nitrate of Soda.....	} 113 pounds.
" 6.	Mur. Ammonia.....	
" 7.	Sulph. "	
" 8.	Sulph. Sodæ	
" 9.	Magnesia.....	
" 10.	Iron Salt.....	

Directions for Mixing.

Mix Nos. 1, 2 and 3 together; then, in a barrel two-thirds full of water, dissolve the chemicals, Nos. 5, 6, 7, 8, 9 and 10; when thoroughly dissolved add the liquid gradually to Nos. 1, 2, 3, and lastly add No. 4, (the Calcined Plaster) which will bring the whole to a powder. The soil used should be perfectly dry and mixed under cover.

The above recipe will make one ton, which will manure seven and a half acres of land. We will furnish the ingredients from No. 3 to 10 inclusive for twenty dollars, which, when mixed with Nos. 1 and 2 will make one ton.

This compound, containing, according to analysis, all the principal ingredients of the genuine Peruvian Guano, has been tested by a number of practical farmers (many thinking it equal to natural Guano), and for Grain, Vegetables, and particularly Tobacco, it has been found the cheapest and best fertilizer now in use.

All orders carefully and promptly executed.

BODEKER BROS.,

DRUGGISTS,

1444 Main Street, Richmond, Va.

CHESTNUT GROVE STOCK FARM AND POULTRY YARDS.

EASTON, PA.

Fine Bred and English Draft Horses, Thoroughbred Short Horn Cattle, Asiatic Poultry and Fancy Pigeons.

Draft Stallion took First Premium at Pennsylvania State Fair, and Warren County Fair, N. J.

The herd of Short Horns took three Herd Premiums, twenty-six first and seven second premiums in the fall of 1875.

Poultry took fifteen Society and nine Special Premiums in Fowls and Chicks, and seven on Pigeons at Lehigh Valley Poultry Exhibition, held at Allentown, January, 1875.

Colts, Cattle and Poultry for sale. Eggs from high-class light and dark Brahmas, Buff, Partridge and White Cochins at \$5 per setting of thirteen, securely packed.

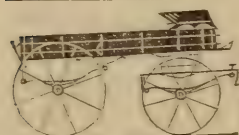
Catalogues and Circulars upon application.

Having purchased of S. S. Cooper his entire herd of Short Horns, I am prepared to sell fine cows, heifers and calves at reasonable prices. Come and see them. No trouble to show the stock. Easton can be reached by N. P. Railroad from Philadelphia, or by N. J. C. Railroad from New York, several trains a day running each way.

THOS. S. MCKEEN,

Easton, Pa.

my-6t



W. C. SMITH,

MANUFACTURER OF

SPRING WAGONS, BUGGIES, &c



Am prepared to furnish at short notice Spring Wagons, with especial reference to the wants of Farmers. Light running and strong, of any desired capacity. Workmanship and material guaranteed. Prices lower than the same quality of work can be bought at in this or any other city. Orders solicited. Letters of inquiry promptly answered.

Repairing promptly and reasonably done.

W. C. SMITH.

my-6m

308 Fifth Street, Richmond, Va.

WAGONS! WAGONS!

The subscriber has on hand

WAGONS AND CARTS,

of various descriptions, that he wishes to dispose of on very moderate terms, and is still manufacturing others, and solicits a call from all in want of any article in his line, and he guarantees good workmanship, and first-rate material.

A. B. LIPSCOMB,

my

116 Cary Street, between Adams and Jefferson.



BALTIMORE STEEL HOE WORKS.

Manufacturers of the

"LOCKWOOD HOE."

BLADE ALL STEEL.

Every Hoe Warranted.

This superior Hoe can be had of any first-class dealer.

LIGHT, CHEAP, EFFECTIVE.

THE CELEBRATED LOCKWOOD HOE, Steel Blade, Malleable Iron Eye
The *Best Hoe in Use.* For sale Wholesale and Retail by

**WATT & CALL, No. 1452 Franklin Street,
RICHMOND, VA**



ONE THOUSAND transplanted Arbor Vitæ 4 to 8 inches high, DELIVERED free to any part of the United States for only FIFTEEN DOLLARS.

500 ARBOR VITÆ (transplanted) 4 to 8 inches high, free to any part of the United States for only TEN DOLLARS.

10 ARBOR VITÆ and 10 WEEPING SPRUCE, nice 10-inch plants, delivered free to any part of the United States for only ONE DOLLAR. EVERGREENS—how, when, and where to plant—mailed free for stamp.

Remit money by draft, registered letter, or money order on Portland

Address, WM. MORTON & SON,
ap—tf Allen's Corner, "Cumberland Co.," Maine

Steam Engines and other Machinery For Sale.



In addition to a full line of New Engines, Saw Mills, and other Machinery of our own improved build, which we keep constantly on hand or build to order, we have now For Sale the following Second-Hand Machinery, all in perfect order, which we will sell at very low figures, viz:

Double-Hoisting Engines, 30-horse power, with drums and other hoisting gear, complete;
4-horse Stationary Engines, good as new;
Flue-Boiler 26 feet long, 42 inches diameter, with 2 flues, 14 inches diameter, iron front and other fittings complete;

150-horse power Stationary Engine; Tubular Boilers, 50-horse power each; 30-horse power Stationary Engines; 8-horse Portable Engine, as good as new; of our own make; 16-horse Stationary Engine with new vertical boiler; several steam Pumps and Fan Blowers of various sizes; Engines for threshing, grinding and ginning, mounted on wheels or not, as may be preferred by the purchaser; Repair Work Solicited.

WM. L. TANNER & CO.

Metropolitan Works, Richmond, Va

mar—61

*

ESTABLISHED 1839.

TO FARMERS, PLANTERS and GARDENERS

PURE
Ground Bone,

MANUFACTURED AND FOR SALE BY

JOHN BULLOCK & SON,

Factory: Washington Road, Baltimore, Md.

Store: No. 61 S. Gay Street, Baltimore, Md.

P. O. Box 636.

For more than thirty years we have been engaged in the manufacture of "Pure Ground Bone", our crude stock being gathered daily from the butchers here, with whom we have yearly contracts. We have completed our new factory, and with the addition of the latest and most approved machinery, will be able to fill all orders sent to us at short notice and guarantee at all times to the purchaser a first-class article at the lowest market price.

Respectfully

JOHN BULLOCK & SON.

THE ONLY RELIABLE SOURCE OF RICH POTASH SALTS.

For Cotton, Tobacco, Corn, Wheat, Sugar-Cane, Potatoes, Fruits
and Grass.

The "Genuine Unmanufactured and Unadulterated Leopoldshall Kainit," (Potash Salts) as wrought from the Ducal Anhalt Mines, Germany, and imported into the United States by myself as Sole Agent and Importer.

The Richest, only Reliable and most Extensive Deposit of Natural "Kainit" known to the world.

I am now prepared to fill orders for the Farmers and Planters direct, in quantities of one ton and upwards.

Having been apprised of the many frauds that have been practised upon the Farmers and Planters, by forcing upon them inferior articles, under the name of Kainit (thus leading them to believe they were getting the Genuine Leopoldshall Kainit, when in fact they were only getting a common refuse calcined salt), the attention of all agriculturists is respectfully solicited to the following

CAUTION.

"Owing to the perpetual injunctions, a copy of which can be seen at my office, granted in Nov., 1872, by the High Court of Chancery for England against several parties, restraining them from using the title "Genuine Leopoldshall Kainit," or a colorable imitation thereof, the vendors of manufactured articles have since then been very careful not to offer their compounds under the above or a glaringly similar name in that country, and are now seeking a market for their low grades and almost worthless (as far as agricultural value is concerned) materials, by shipping them to the United States."

I advise all to send to me for Circulars, that will give you the opinions of some of the most reliable "Agricultural Chemists" in the world, as regards the benefits to be derived from the use of "G. L. Kainit," and also how to apply it.

Send for samples, and familiarize yourselves with the appearance of "G. L. Kainit," so that you may not be deceived.

Price \$24 per ton, 2,000 lbs. packed in strong bags, delivered on board vessel or cars at Baltimore. Cash must accompany all orders. Please show this advertisement to your neighbor.

Genuine Leopoldshall Kainit should always be in connection with other Manures.

WINFIELDS DUNAN.

20 and 22 South Street, Baltimore. It

Sole Agent and Importer for the United States.

FARMERS AND DEALERS

Pure Fine Ground Bone

PURE BONE FLOUR. PURE DISSOLVED BONE ASH. PURE DISSOLVED RAW BONE

66° OIL VITRIOL. GERMAN POTASH SALTS. Pure Chemicals for making Superphosphate at the lost market price. Call at

R. J. BAKER & CO'S.

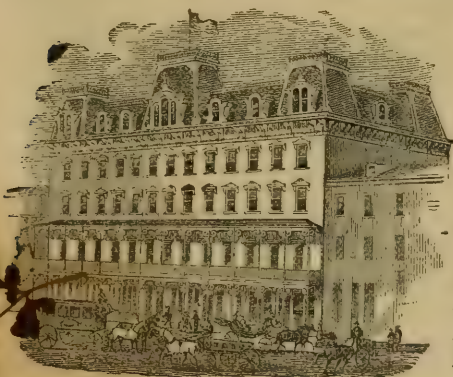
MALTBY HOUSE,

BALTIMORE, MD.

C. R. HOGAN, Proprietor

Has just received a series of costly and elegant improvements, embracing every department of the Hotel, making it one of the finest Hotels in the city.

Board reduced to \$2.50 per day



SOUTHERN FERTILIZING COMPANY

ANCHOR



BRAND.

TOBACCO FERTILIZER,

(COMMONLY KNOWN AS "GILHAM'S.")

RETAIL PRICE REDUCED TO
\$65 PER TON AT FACTORY
LIBERAL DISCOUNT ON CLUB LOTS

ALSO,

STANDARD FERTILIZERS

FOR

Cotton, Corn, Peanut and Truck Crops.

MORO PHILLIPS,

MANUFACTURING CHEMIST,

MANUFACTURER OF

ACIDS AND OTHER CHEMICALS.

MORO PHILLIPS' SUPER-PHOSPHATE, Price \$50—the best grain producer in the market.

MORO PHILLIPS' PURE PHUINE, Price \$50—the best fertilizer for truckers we know of.

MORO PHILLIPS' TOBACCO INVIGORATOR, Price \$60; prepared especially for Tobacco.

SERENA GUANO, a natural organic deposit.

For sale at Depots { 110 S. Delaware Av., Philadelphia, Pa.
 { 95 South Street, Baltimore, Md.,
And by trade generally. Discount to dealers.

ap-6t

FARM LANDS.

The subscriber offers for sale several tracts of land, varying in size and quality. That on which he resides is an excellent little farm with rare advantages. Terms very liberal.

THOS. P. LILLY,

Kent's Store, Fluvanna County, Va.

[The above Tracts of Land are very desirable and are offered at low rates.—L. R. D.]

apl

G. F. WATSON'S FURNITURE WORKS, RICHMOND.

Having timber tracts in this State sufficient to last several years, with a complete lumbering rafting, and saw-mill organization of fifty men, together with one of the most complete factories in the country located in this city, can furnish Poplar and hard wood (no soft pine) low-priced FURNITURE as cheap as any factory North or West—and fine Walnut FURNITURE cheaper. A stock of one million feet of lumber insures seasoned work, warranted in this and every respect. Manufacture MATTRESSES of all kinds.

Lumber-mill, Indiantown, Va.; Factory, Rocketts street; lumber-yards, Ash and Poplar streets; warerooms, No. 18 Governor (Thirteenth streets,) Richmond.

apl



BLATCHLEY'S

Improved Cucumbr Wood Pump is the acknowledged Standard of the market, by popular verdict, the best pump for the least

money. Attention is invited to Blatchley's Improved Bracket, the Drop Check Valve, which can be withdrawn without disturbing the joints, and the copper chamber which never cracks, scales or rusts and will last a life time. For Sale by Dealers and the trade generally. In order to be sure that you get Blatchley's Pump, be careful and see that it has my trade mark as above. If you do not know where to buy, descriptive circular, together with the name and address of the agent nearest you, will be promptly furnished by addressing with stamp,

CHAS. G. BLATCHLEY, Manufacturer,
mar 506 Commerce St., Philadelphia, Pa.



TIN WIRE RINGS.

Will not make a hog's nose sore.

Hardware Dealers sell them.
Ringer, \$1; Tin Rings (100), 50c; Coppered Rings, 50c; Tonges, \$1.25; by mail, post-decatur, ill paid. Circulars free.

WALNUT GROVE FARM.

THOROUGHbred and GRADE JERSEY CATTLE, BERKSHIRE and ESSEX SWINE, BRONZE TURKEYS and BRAHMA FOWLS,

I took 1st premium on Thoroughbreds, (Male and Female,) and 1st premium on Grade Jerseys, also, 1st on Bronze Turkeys at Va. State Agricultural Society, 1874.

Prices moderate—Satisfaction Guaranteed.

Address,

G. JULIAN PRATT,

mar—1y Waynesboro, Augusta co., Va.

TO FARMERS, Bowen & Mercer's Super Phosphate REDUCED TO

\$40 for single ton; \$38 for five tons and over; \$35 for ten tons and over.

Warranted Equal to any Manufactured.
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BOWEN & MERCER,

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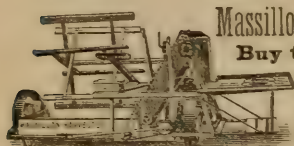


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RICHMOND, VA.,

JULY, 1875.

No. 7.

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See the report of Mr. A. M. Bowman, President of the Baldwin Augusta Agricultural Society, to the Virginia State Agricultural Society, published in this number of the *Planter and Farmer*, and note the fact that the “Eureka” is not only much the best of the six fertilizers he tried, but that it was also the cheapest, and bear in mind that at the time he tried it he did not even know who was manufacturing it: and followed his example in ascertaining what is the *best* and also in letting the farmer know which is the best. The value of accurate experiments, and the purchase from reliable manufacturers, cannot be overestimated.

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New Series. RICHMOND, VA., JULY, 1875. No. 7

SHEEP HUSBANDRY AND THE RENOVATION OF THE SOIL.

A correspondent of our late cotemporary, the *Southern Farm and Home*, after declaring that, in his opinion, no land is worth cultivating, or will pay expenses and yield a revenue, which is not fertile enough to produce ten bushels of corn, eight bushels of wheat, or between 300 and 400 pounds of seed cotton per acre, because in the present condition of agriculture, and with the present system of labor, it is wiser to throw out all such land, if we cannot do anything else with it, than try to raise corn and cotton, proceed to show how lands of that kind may in a few years be restored to a high state of fertility, and produce in the meantime a good interest on the capital invested, by converting them into sheep-walks. The way to do this he details as follows :

Let us suppose a plantation of 1,000 acres, well fenced and supplied with every thing needed except the sheep. I would divide it into three parts, two of which should be set apart for grazing, and the third, including woods, house lots, etc., should have from 10 to 150, of arable land for cultivation and renovation. In February and the early part of March, having previously repaired and built all the requisite fences, I would prepare well from forty to fifty acres, half of which I would sow in oats in the end of February, and plant the rest in corn in March. Having done this, I would then sow eight or ten acres more in oats, on which I would fold my sheep at night during the summer and fall, in pens enclosing about half an acre.

The sheep should be bought in April or May; 500 will do to begin with, increasing until the number is 1,000.

The folding the sheep is the source of improvement and profit, and should therefore be looked after with the utmost care. They should never be put in pens until after sundown and turned out before sunrise, and if cattle are penned with them, they will not suffer from disease, and will be protected from dogs.

The first half acre folded will be sufficiently manured in ten days, and then the pen should be removed, and the manured ground thoroughly ploughed, and sowed in oats and ruta бага turnips; and the same process should be followed with each successive pen until the beginning of August, care being taken to plough under all that part of the land set apart for folding on which the oats have ripened, before the folds have reached them.

In the beginning of August the sheep ought to be divided into two flocks, one consisting of the breeding ewes and stock weathers, and the other of the lambs and such old ewes and wethers as may be intended to prepare for market. The folds may now be brought back to the ground first penned and sown in oats and turnips, now covered with fine growth of both for the second folding. In this second folding there should be two pens for the two flocks, the lambs and fattening sheep being allowed to occupy each pen three or four days before the stock sheep, and allowing the latter to remain for four or five days before removal.

The land folded before the middle of September, may be ploughed and sown in turnips for use of sheep in winter and spring, and the subsequent pens can be sown in rye and wheat or any other quick-growing crop for spring grazing.

When winter comes, the fat sheep should be disposed of as soon as possible, the breeding ewes put in one field to themselves, and the rest of the flock in the other. They should be brought up at night and put in separate lots, provided with good sheds for shelter, and fed night and morning on hay or fodder and turnips. When the ewes begin to drop their lambs, in March, they should be separated from the rest of the flock, fed twice a day on chopped sheaf oats and allowed to run on land prepared for them the previous fall.

The work of each succeeding year, differs only from that of the first, in that instead of breaking new ground for oats, they shall be sown in the twenty or twenty-five acres of corn land and the ten acres of manured land of the previous year, and these ten acres of the manured land should at the same time be seeded heavily in clover and grass. Thus ten acres of clover and grass land would be added each year to the resources of the farm. When the 100 or 150 acres first set aside for cultivation have been by this process converted into clover and grass pastures, fifty acres may be taken in from each of the pasture fields first set aside, and the same system pursued until they are redeemed. Thus in a few years the whole farm will be raised to a very high state of fertility, and the increase and sales of the sheep will yield a good revenue, with very small expenses for labor. An experienced shepherd and a couple of smart boys are all the labor permanently required. In shearing time and harvest, extra labor would be necessary for a few days.

I have no doubt that by the adoption of a system such as I have indicated above, or one substantially like it, our poor red hills may be reclaimed, the comfort and prosperity of the people promoted, and the value of the real property of the State immensely increased.

PRIMING TOBACCO.

The relative advantages of priming and of not priming tobacco can only be tested by trial and experience. Many years ago I made tobacco without priming, and succeeded very well, but the practice was ridiculed by my neighbors and I abandoned it, in part, by priming the earlier part of the crop, and not priming the later plants. When you prime you have the advantage of making a coarser, richer, heavier leaf for stemming or shipping, if the soil is suitable for such tobacco, and red or stiff lands of good fertility answer best for that kind of tobacco. But if you have light gray or sandy land, it is best adapted to making manufacturing tobacco. Now I contend, (and my experience proves it) that by not priming, and topping to eight, ten or twelve leaves above the place on the stalk of ordinary priming, you make more tobacco and of a finer quality, and more disposed to cure, of a bright color. There will be very few and stunted suckers, principally at the three top leaves—so there is an actual saving of labor in suckering and worming. When tobacco is large enough to top, the priming leaves have attained their full size, and draw but little from the plant afterwards, besides you save the drawing of luxuriant suckers which grow on the primed tobacco and exhaust what ought to go in the leaves. The unprimed is much cleaner of dirt and sand, is not near as liable to break from rains or storms, is finer and brighter, and sells for a better price. Living in a section where little, if any, shipping or stemming tobacco is made, I am not priming any now, and will “show my faith by my works.”

W. A. GILLESPIE.

A FEW WORDS ON THE LABOR QUESTION.

“Farming don’t pay,” has been a cant throughout the South since Lincoln’s emancipation proclamation, and almost as universal has been the accusation, “our labor is too unreliable,” meaning of course negro labor. Both observation and experience teach me that “white labor” is as unreliable, and perhaps more so than “negro labor” on the farm.

To labor systematically six days in the week is no luxury, or the curse would not have been imposed on Adam to earn his bread by the sweat of his brow; and the farm employee that does not require watching, stimulating, encouraging, and the force of example, is a treasure too valuable to be utilized simply as a farm hand. And yet most Southern farmers, who ought to know the negro’s character well enough to control him as a farm laborer, are clamorous for better labor; for the introduction of foreigners to cultivate our crops, a sprig which they have never seen in their lives, believing that white laborers, less treacherous and more reliable than negroes, will renovate matters in a trice, and make the South blossom as the rose under their improved labor.

Never, in my judgment, was a graver mistake entertained. Turn for a single season the tide of immigration from the Northern to

Southern ports, and before a crop could be harvested, we would be afflicted by worse than a Persian famine. A myriad of consumers thrown upon the South would be worse than the grasshopper plague of the Northwest. The South has an abundance of material out of which to make laborers, and needs only the introduction of the power to fashion, shape, and control that material. I have often asserted, the negro is the best farm laborer this generation of farmers will ever see, and it is wrong for us to attempt to introduce a competitive class who know nothing of our crops, our natures or our language.

But what are we to do, asks every one? We can't control the negro; he is naturally lazy, treacherous and faithless, and dependence upon him is worse than idle. I am not the champion of the negro, for in this State, I think, I am regarded by them as their enemy; but I have so far succeeded in utilizing their labor as to induce the belief they suit me better than any white men could.

Before publishing my plan of management, let me ask, do not Southern farmers expect too much of the negro? We say, he won't work unless he is watched and made to work. Have we ever learned that laborers act differently anywhere on earth? I have frequently heard the remark, "Northern men get more work done with fewer hands, than we at the South, with more hands." Is there not a reason for this? The Northern farmer says, come, let us go do so and so. The Southern farmer says, go boys, and do so and so. Leading and driving are too different occupations, and the farmer that leads the negro gets more work out of him for less money than can be got from any other employee. Consequently those men who from childhood have been inured to work, who can hold the plough, or throw the grain cradle, are annually pocketing more net money from their investments in Southern farms than any other class of agricultural laborers in this or any other country.

Can the same be said of large land-owners, who, because they cannot have work done as of yore, or because they cannot control affairs around and about them just as they wish, are continually abusing the negro, and asserting that farming at the South don't pay? Not at all. Such men deserve our sympathy, for to my mind (to use a vulgarism), the unreconstructed Southern farmer is of all men most miserable. He hankers after the flesh pots to no purpose.

What more common than to hear, that in the North lands are worth twenty-five to one hundred dollars per acre, and that farming pays better there than at the South? The whole thing is a delusion. Lands at the North are high priced because they are in demand, and they are in demand because there is a population able to buy. Bring into the South a population of moneyed men able and willing to buy, and let Southern farmers put a phase upon their farms that makes them desirable, and Southern lands will become high priced too, because purchasers will be found who are willing to buy. Let each reader ask himself the question, how many farms do I know that would appear attractive to a purchaser? A monosyllable will answer the question in a majority of instances. No, the

high priced lands of the North are no evidence of agricultural thrift. Those farmers live very well it is true, but they work much harder, and are more troubled with unreliable labor than we of the South. I have heard Northern farmers say, time and again, that during their busiest season, they have to-day had all the "help" they wanted, and to-morrow it was gone. In the Northwest labor sets its own price and receives it every night and the teeming hordes of laborers that are constantly migrating westward through the Northwestern States, are less reliable than the weather itself; for fervently believing, that just a little further westward is that Eldorado for which they have long sought, and the accounts of which brought them to this "land of the free," they sojourn and labor here to-day to "raise the wind" to take them yonder to-morrow. Had we to deal with such a people our crops would seldom be planted, much less cultivated and harvested. Far better to depend upon the laborer we have, whose local attachment at least fixes him almost invariably for one year.

But the Northern farmer makes more money than we do, say those who know nothing about it; but it is all a mistake. They make less and handle less money than we do, and if they lived the lives we do, they would be far more poverty stricken. The Northern farm that will sell for one hundred dollars per acre, will produce, perhaps, an average of thirty bushels of wheat or its marketable equivalent in grass, worth probably thirty dollars. Out of this must come ten dollars for interest on investment, half as much more for taxes and labor, and when the subsistence of the family is deducted, there is precious little left. True, employees are less numerous constantly, but day labor is doubtless valuable, and all Northern farms require double the amount of plough stock we do at the South, and everywhere the annual expense of a horse is almost equal to that of an average hand.

The net income from a first-class Northern farm is not five per cent., and I consider a similar Southern farm as a failure that does not double that income. I have repeatedly seen farms in South Carolina of from one to five hundred acres, sell from five to twenty-five hundred dollars, and no sooner had they changed hands than they were leased to negro farmers for twenty-five per cent. on the investment. And just here is where we of the South have a great advantage over Northern farmer, if we could only so accommodate ourselves to the times as to utilize our advantage. Lands are cheap and labor is abundant, and we must learn to control it. Concessions must be made, and if properly made, will invariably redound to our profit. If, as owners of the soil, possessors of what little capital there is in the South, and with a superior intelligence, we do not control the labor of our land, the fault lies at our own doors. We have no system, no concert of action. To the contrary, we are constantly pulling against each other. We are the employers, but every farmer has his own notion of things, and cares nothing for his neighbor's plans. If I hire hands for wages, one of them may at any time

conclude to leave. If so, he only goes across my line fence and my neighbor hires him. If I give my employees a portion of the crop, everybody says they will steal more than their share. You may as well kill a dog as to give him a bad name. So, as a practical farmer, I have never adopted this policy, nor did I hire for wages longer than I found I had to become a day laborer myself to enable me to control the labor to suit me. Hence, since 1869 I have simply tenanted my lands and have yet to see a reason for not doing so.

I allot the land, the laborers furnish everything else, and pays all expenses except the taxes. If he is unable to carry on the farm alone, I assist him for the year, with the hope he will be able the next year. If he makes nothing, and I think he is to blame, I discharge him, and have no difficulty in securing others. My rents are reasonable, and have never failed to be forthcoming, except in two instances, where two men contracted store accounts without my knowledge, and being threatened by the merchant with a law suit, they stole my cotton to pay the accounts. I blamed the merchants more than I did the negroes. I have never had a hand, but in these two instances, to fail to make more than the rent and the expenses of his portion of the farm.

To my mind no people ever had a fairer opportunity of becoming lordly land owners, or of establishing a system of agricultural tenantry, unsurpassed in the history of the world, than have the Southern farmers at this present time. Whether as a race we will ever see it, and practice it, is another thing.—D. WYATT AIKEN, *in South Carolinian*.

WHY SAM. SIMPSON SOLD OUT.

My neighbor Sam. Simpson has sold out and is going West. There has been a plain, honest, industrious, economical German—Hans Leibenstein—hanging around Simpson for some time trying to purchase his farm. At last Hans got it. Simpson thinks he sold it at a bargain. Doubtless Hans thinks he got it at a bargain. I had an errand down to Simpson's the other night. I had not heard that he had sold his farm; but upon my entrance into the house, I saw by the look on the faces of the family that some unusual excitement was animating them.

"Well, Crumple, you're going to lose me for a neighbor," was Simpson's first words after I had got settled in the splint-bottomed chair his daughter Sally handed me; and the whole Simpson family looked at me as if they expected I would jump out of that chair on account of the news, with a suddenness and force only equalled by an explosion of nitro-glycerine under me, but I didn't. I simply asked, "How's that?" "I've sold." "Sold what?" "The farm." "To whom?" "Hans." That was the whole story. I didn't need any further explanation; but Simpson proceeded to say:

"You see the old farm is completely run out. I can't make the two ends meet the best of years. I've got tired tumbling around

among the stones, and I'm going where there's some virgin soil that will produce something. So I struck up a trade with Hans. He has been after it, off and on, for a year or more. I wanted \$40 per acre for the old place. He offered me \$25. Finally, he offered me \$30; and, after considering the subject, I told him I would take it if he would pay me cash down. Hadn't any idea he would do it; but he said if I would throw in the stock and farm implements he thought he could raise the money. I finally told him I would; and what do you think, sir? He hauled out of his greasy old pants pocket a \$1,000 bill and handed it to me to bind the bargain, and said as soon as the papers were receipted he'd pay me the balance, which he has done to-day. I feel kind of sorry to part with the old place; but the thing is done and there's an end on't! What d'ye think?"

All this time my Crumple nature had been rising within me like an inspiration. Here was this man Simpson who inherited this farm—one of the fi est in the neighborhood—who had skinned it without scruple until it would scarcely raise white beans under his system of treatment. And he had got to leave, or mortgage the farm of his ancestors to live on.

Then here was Hans, who came into the neighborhood with his frau five years before, with only his wife's strong and willing hands, economy and industry. They had rented a worn-out farm which they had finally purchased and paid for, and had saved \$3,000, with which to pay for Simpson's 100 acres. So in answer to "What d'ye think?" I was ready to respond; and did it in this wise:

"What do I think? I'm glad you're going, neighbor Simpson! I'm glad Hans has got the farm. He deserves it, you don't. He has got brains and industry; you haven't got either. Under your management the farm is a disgrace to the neighborhood; Hans will make it a credit. Your farm lying next to mine depreciates the value of my land ten per cent.; the same land owned by Hans will add to the value of mine 20 per cent. I shall be the richer for your going and the poorer for your staying. I am glad you're going."

You should have seen Simpson's and his family's faces. They grew cloudy and long. Indeed, I believe they began to scowl at me. Simpson said:

"You're pretty rough on an old neighbor, Crumple, now that he is going. I thought you and I had always been friends. I've tried to be a good and accommodating neighbor. You've been a good one to me, and I'm sorry to leave you; but if you're glad I'm going, I'm not sorry either."

"Simpson," I said, "let us understand each other. As a neighbor, so far as neighborly intercourse is concerned, I've no fault to find, and am sorry you are going. In talking about you as a farmer, you are and always have been a poor one. No man with such a farm as yours ought to want to sell—at least there ought to be no necessity for selling. But you are not a farmer. You haven't got a single

quality essential to make a good farmer. In the first place you detest the business; you don't take any pride or interest in it; you don't care whether your land improves under cultivation or not; you want to get all off it you can without taking the trouble to pay anything back; you skin it year after year, and cry out against the seasons; you denounce every man you deal with as a sharper or swindler, because you do not get the prices for your products other people do, and yet you do not seem to know that the reason is that your products are poor in quality, and put on the market in miserable shape; your stock has been running down ever since your father died; you haven't built a new fence and scarcely repaired an old one; your manure has not been hauled out and judiciously used on the farm; your pigs have bothered your neighbors more than they have benefited you; your cattle have become breachy, and I have had to shut them up in my stables in order to keep them out of my grain; you have distributed from your fence corners more weed seeds than any farmer I know of, and thus given your tidy neighbors more trouble than your favors to them would compensate. In short, it is time for you to move. You ought to have a virgin farm! It will take you but a few years to strip it of its fertility; then you'll have to move again, and keep moving. You belong to a very large class of farmers who are a curse to any country. The fact is, you are not, never was, and never will be a farmer in the right sense of that word. You are only a guerilla. You live by robbery—robbery of the soil. And it is not right, neighbor Simpson. You had better seek some other vocation, now that you've got the cash to start with. You like horses; you know horses; you can talk horses from daylight till dark; you can't be fooled with horses; you like to trade horses; you had better go into some smart town and start a livery stable. You'll make money at it; you'll never make money farming; you'll grow poorer and poorer the longer you attempt it."

Just then Sally Simpson clapped her hands and said: "That's so, father! Haven't I told you so? Mother and I have often talked it over, Mr. Crumple, and you are just as right as can be; and father knows it too if he would only say so. I know you too well (and you've done us too many kindnesses for us to ever to forget them), to believe that you have talked to father in the way you have out of any unkind feeling. It is true, every word of it, father, and you ought to thank neighbor Crumple for talking just as he thinks; I do; and I don't think the less of him either."—*New York Tribune*.

THE LONELINESS OF FARMING LIFE IN AMERICA.

An American traveller in the Old World notices, among the multitude of things that are new to his eye, the gathering of agricultural population into villages. He had been accustomed in his own country to see them distributed upon the farms they cultivate. The isolated farm-life, so universal here, either does not exist at all in the greater part of continental Europe, or it exists as a comparatively

modern institution. The old populations, of all callings and professions, clustered together for self-defence, and built walls around themselves. Out from these walls, for miles around, went the tillers of the soil in the morning, and back into the gates they thronged at night. Cottages were clustered around feudal castles, and grew into towns; and so Europe for many centuries was cultivated mainly by people who lived in villages and cities, many of which were walled, and all of which possessed appointments of defence. The early settlers in our country took the same means to defend themselves from the treacherous Indians. The towns of Hadley, Hatfield, Northfield and Deerfield, on the Connecticut River, are notable examples of this kind of building; and to this day they remain villages of agriculturists. That this is the way in which farmers ought to live, we have no question, and we wish to say a few words about it.

There is some reason for the general disposition of American men and women to shun agricultural pursuits which the observers and philosophers have been slow to find. We see young men pushing everywhere into trade, into mechanical pursuits, into the learned professions, into insignificant clerkships, into salaried positions of every sort that will take them into towns and support and hold them there. We find it impossible to drive poor people from the cities with the threat of starvation, or to coax them with the promise of better pay and cheaper fare. There they stay, and starve, and sicken, and sink. Young women resort to the shops and factories rather than take service in farmer's houses, where they are received as members of the family; and when they marry, they seek an alliance, when practicable, with mechanics and tradesmen who live in villages and large towns. The daughters of the farmer fly the farm at the first opportunity. The towns grow larger all the time, and in New England at least, the farms are becoming wider and longer, and the farming population are diminished in numbers, and, in some localities, degraded in quality and character.

It all comes to this, that isolated life has very little significance to a social being. The social life of the village and the city has intense fascination to the lonely dwellers on the farm or to a great multitude of them. Especially is this the case with the young. The youth of both sexes who have seen nothing of the world have an overwhelming desire to meet life and to be among the multitude. They feel their life to be narrow in its opportunities and its rewards, and the pulsations of the great social heart that comes to them in the rushing trains, and passing steamers, and daily newspapers, damp with the news of a hundred brows, thrill them with longings for the places where the rhythmic throb is felt and heard. They are not to be blamed for this. It is the most natural thing in the world. If all of life were labor—if the great object of life were the scraping together of a few dollars, more or less—why, isolation without diversion would be economy and profit; but so long as the object of life is life, and the best and purest and happiest that can come of it, all

needless isolation is a crime against the soul, in that it is a surrender and sacrifice of noble opportunities.

We are, therefore, not sorry to see farms growing larger, provided those who work them will get nearer together; and that is what they ought to do. Any farmer who plants himself and his family alone—far from possible neighbors—takes upon himself a terrible responsibility. It is impossible that he and his family should be well developed and thoroughly happy there. He will be forsaken in his old age by the very children for whom he has made his great sacrifice. They will fly to the towns for the social food and stimulus for which they have starved. We never heard of a colony settling on a Western prairie without a thrill of pleasure. It is in colonies that all ought to settle, and in villages rather than on separate farms. The meeting, the lecture, the public amusement, the social assembly, should be things easily reached. There is no such damper upon free social life as distance. A long road is the surest bar to neighborly intercourse. If the social life of the farmer were richer, his life would by that measure be the more attractive.

After all, there are farmers who will read this article with a sense of affront or injury, as if by doubting or disputing the sufficiency of their social opportunities we insult them with a sort of contempt. We assure them that they cannot afford to treat thoroughly sympathetic counsel in this way. We know that their wives and daughters and sons are on our side, quarrel with us as they may; and the women and children are right. "The old man," who rides to market and the post-office, and mingles more or less in business with the world, gets along tolerably well; but it is the stayers at home who suffer. Instead of growing wiser and better as they grow old, they lose all the graces of life in unmeaning drudgery, and instead of ripening in mind and heart, they simply dry up or decay. We are entirely satisfied that the great curse of farming life in America is its isolation. It is useless to say that men shun the farm because they are lazy. The American is not a lazy man anywhere; but he is social, and he will fly from a life that is not social to one that is. If we are to have a larger and better population devoted to agriculture, isolation must be shunned, and the whole policy of settlement hereafter must be controlled or greatly modified by social considerations.—Dr. J. G. HOLLAND, in *Scribner's Monthly*.

THE ELEMENT OF PLUCK.

People in pecuniary misfortune, in estimating their liabilities and resources, seldom consider among the latter the element of *pluck*. The tendency with nearly all unfortunates is to magnify difficulties, and underrate or wholly forget their power to overcome them. A man in good health, with unsullied character, need fear no evil, nor be robbed of his happiness, no matter how adversely things may appear. If he is heavily in debt, and can satisfy the community

that he is straining every nerve and appropriating all his resources to discharge his obligations, there is no danger of his losing a well-earned reputation, and there is no reason why he should not be cheerful in his family and joyous in his own heart. The self-consciousness of integrity, coupled with the approving smiles of the Father above, should enable a man to face every foe and surmount every difficulty. If, instead of burdensome debt, he is overtaken by fire or flood, so that the accumulated comforts of years are swept away in an hour, he gains nothing by sitting down, folding his arms, and weeping over his misfortune. "Up and at it," is a familiar but expressive phrase. Pluck is a lever that upheaves difficulties. Before a resolute man the green withes of adversity snap like threads of tow. It is not enough that a man in trouble has physical force to execute, and mental clearness to plan, but behind both he needs the impelling power of pluck. The steam engine may be ever so perfect and bright, the engineer ever so competent, but both would be unavailable to draw the long line of cars if *steam* were lacking. Pluck is to a man what steam is to the railway train.

A farmer, a short time ago, came to a well-known citizen for advice. He was in low spirits; matters had gone wrong with him through loans to friends, and speculations outside of his farming business, until his debts became exceedingly burdensome. Unaccustomed to such interruptions in his hitherto unwavering success, his spirits gave way. Brooding over his troubles, he became morose and gloomy; he had no cheerful words for family or friends; he allowed trifling causes to keep him from church, and instead of listening to the encouragement of the Gospel, he moped on Sundays around his house and barns. Wherever he went he carried a "hang-dog look," and whatever he did was done feebly, as though strength and ambition were both gone. In this condition of things a friend advised him to open his mind to the citizen above mentioned, whose long familiarity with trials made him capable both of sympathy and counsel. The conversation soon developed the fact that the farmer owned a property worth thirty thousand dollars; that his entire indebtedness did not exceed thirteen thousand dollars, and that his income exceeded his outgoes, including interest on his indebtedness, by one thousand dollars. "Why," said the citizen, "have you been disheartened over such a condition of affairs as this? What! a surplus of \$17,000, and a net income of \$1,000 per year to apply to your debts, which will grow less and less burdensome as successive payments are made. Why, my friend, thousands of poor fellows struggling with debts, without any surplus income, would be happy to step into your shoes and sing like a lark over their good fortune. There is but one thing that is the matter with you, my friend; you have simply lost *pluck*! Yes! one other—professing faith in a Divine Providence, you have also lost *trust*." So after many encouraging words on the part of the citizen, he bid him good-bye with a strong grasp of the hand, and with the parting words, "thank you, sir, I feel better." And so he did; his eyes were opened to realize

that, as in the case of thousands of others, his troubles were imaginary. How different the spirit of a furniture dealer of my acquaintance, whose entire property above ground was recently destroyed by fire in a single night. Three buildings, a stock of furniture, household comforts, wardrobes, keepsakes, indeed everything, so that morning found the family dispersed in friendly dwellings with nothing saved but the garments in which they fled.

But see this man's pluck. In answering a friend's sympathizing letter, he writes: "Your kind letter of sympathy at our late mishap was duly received. I have so much to tell I hardly know where to begin. Well, thank Providence, we are all well, in excellent health and full of pluck. We have almost forgotten about it, and are tired of talking fire, and are on the go-ahead track only. In less than twenty-four hours we had a store rented, and commenced to get ready for a new start. Some folks could not understand how I could take it so coolly, and if our loss had not been so complete and total, I might have been suspected from my coolness of having a hand in it. I have been rusting for two years, my son ran the business, while I did the playing. But now the rust is pretty well rubbed off, and I am about as bright as ten years ago." To any one in pecuniary distress, let me suggest that the way out of difficulties is not by hang-doggedness, but pluck.—*C. C. N., in American Agricultural.*

SHEEP ON A POOR FARM.

Some farmers of our acquaintance feel an antipathy to sheep, for the reason that they "bite close." We consider this their chief recommendation. They can only bite close where the pasture is short, and the pasture is short only on a poor farm. A poor farm will necessarily be encumbered with briers, weeds and brush, in the fence corners. Under such conditions, we would say to a farmer who has twenty dollars or upwards in cash (or credit for it, and then let him borrow the amount if he has to pay one per cent a month for the use of it), invest it in as many ewes, not older than three years, as you can get for that money. Put them this summer in such a field as we have described, and give them, in addition to what they can pick up, a pint of wheat bran and oat-meal daily, with free access to water and salt. They will first "go for" the briers and clean them out; every portion of that field will be trodden over and over again, and the weeds will have no chance. Fold them on that field during winter, and carry to them feed sufficient to keep them thriving. Get the use of a good buck in season—South-Down would be preferable—and in the Spring, if you *have luck* (that means if you give them proper attention and feed *regularly*), you will raise more lambs than you have ewes. The money will be more than doubled, and the wool and manure will pay for their feed and interest. In the Spring you may put that field in corn, with the certainty of getting fifty per cent increase of crop.—*American Agriculturist.*

HOW TO ESCAPE TOBACCO WORMS,

Every person who lives in a tobacco country knows how troublesome to planters the horn-worm is, and what labor it requires to destroy these insects and so prevent them from riddling the tobacco leaves as they ripen on the hill. Some of our North Carolina neighbors, we learn, have of late adopted an easy method of protecting their tobacco crops against this worm. They simply use a solution of cobalt (or fly-stone), to be had at all drug stores, which destroys the tobacco-fly that lays the egg that hatches the worm. The common Jamestown weed, which vegetates everywhere, is allowed to grow in limited numbers in the tobacco grounds and in the fence corners, and the cobalt in a powdered state, mixed in a solution of honey-water, is dropped in the blossoms of the plant. As the tobacco-flies feed freely from the flowers of this weed, they imbibe the poison, which kills them almost instantaneously. We are told that where the specific is used the dead flies may be seen laid out on the ground far and near. Of course, the fly being dead, the egg is not laid, and the worm is not hatched.—*Tobacco Leaf*.

WHAT IS HIGH FARMING?—An American farmer of note, after visiting England and examining with the critical eye of a practical and experienced agriculturist the system pursued there, says :

I am thoroughly confirmed in my old faith that the only good farmer of our future is to be the "high farmer." There is a widely prevailing antipathy among the common farmers of our country against not only the practice of high farming, but against the use of the phrase by agricultural writers. This is all wrong and should at once be corrected. Through some misconception of the meaning of the phrase, and also of its application, they have come to believe it synonymous with theoretical "book farming," "new-fangled notions," boasted progress, followed by disappointment and final failure. This is all an error. High farming simply means thorough cultivation, liberal manuring, bountiful crops, good stock, good feed, and paying profits therefrom. It is not strange that misconceptions have arisen in the minds of doubting farmers who have been eye-witnesses to some of the spread-eagle experiments of enthusiastic farmers, better supplied with money obtained in a business they know how to manage than with practical experience on the farm. Bountiful crops and paying profits of course are what all farmers who are depending upon the farm for an income are striving to obtain ; and every year as it passeth is re-confirming the opinion that the profits are small, and will grow "beautifully less" where high farming is not practiced.

PLASTER AS A TOBACCO FERTILIZER.—We are assured by those who have tried it, that this fertilizer has a very fine effect on tobacco—increasing its weight and quality, but not its surface. It enables it to stand drouth much better. A tablespoonful should be put in the bud of the young plant sometime before topping.

FERTILIZERS, THE CREDIT SYSTEM AND HIGH PRICE.

Professor Ville, in his admirable work on "Chemical Manures," observes very truthfully that all successful farming depends upon heavy manuring.

The great fault with our Southern farmers is that they cultivate too much surface and too much poor land. They spend too much money in labor and not enough in manures. Our old fogies are constantly going back upon the past, contending that in the olden times they made good crops without fertilizers, and that we should do so now. They ignore the fact that the most unaccountable changes have taken place, and that it is much more difficult to farm it successfully now than it was fifty years ago. Take wheat for instance. If the same system were attempted now that prevailed then, most of our lands would scarcely yield seed. But while these important changes have taken place a kind Providence has not left us without a remedy to meet them. The concentrated or chemical manures have been providentially placed within our reach, and it is both our duty and interest to use them. These fertilizers have become a necessity, and there is but little successful farming without them. Immense quantities of these fertilizers are now being used, but in consequence of the extensive adulterations practiced in their manufacture and the high prices prevailing, thus far but little profit has been realized from their use. There is no denying the fact that the prices of these fertilizers are much too high; but this evil is not due to the seller or manufacturer alone. It is chargeable in a great degree to the farmers themselves. They will buy on credit, and the credit system necessitates immense cost and heavy losses in the shape of bad debts, which must be anticipated by a wide margin of profits. It may be safely estimated that a credit business involves a loss of at least twenty-five per cent. upon the gross amount of sales. This immense loss, which falls mainly upon the farmer, might all be saved by the general adoption of a cash system; but it is contended that a cash system is altogether impracticable, because the farmer cannot raise the cash. One of the most prominent frailties of our fallen natures is to be constantly magnifying prospective difficulties. Doubtless a too sudden change from a credit to a cash system would cause considerable interruption in the general current of trade, and many would be unable to procure their usual supplies for a while, but the difficulties would be much less than are generally anticipated. A little pinching necessity occasionally is very necessary in schooling the character and forcing us into habits of self-denial and economy. It has the further effect of sharpening the wits and stimulating the energies in a most wonderful manner. If credit were generally denied the farmer, a little pinching necessity would soon prompt him to raise the ways and means necessary, and the natural flow of trade would soon set in again. Co-operation is the great remedy for these evils, but the co-operative system is impracticable except upon a cash basis. Co-operation not only brings down prices, but it breaks up

monopolies and unfair and unjust combinations of other interests. Many farmers who cannot raise the cash necessary for their guano purchase can make arrangements equal to cash. Let them arrange with their commission merchants to accept their drafts on time. There is scarcely a respectable farmer in the country who cannot effect such an arrangement if he would make the proper efforts. Let the farmer pledge his crops, and let it be distinctly provided that when he draws upon his commission merchant on time he is to put his crops in the hands of the merchant in time to meet his draft at maturity, so that he will not be compelled to advance the money. But in carrying out this arrangement good faith and punctuality are indispensable on the part of the farmer. The acceptance of the commission merchant can be used as cash, for the moment it falls due it is paid.

If the farmer is compelled to buy on time, it is much better that he should get his accommodations at the hands of his commission merchant than anybody else, because, in the first place, he makes his commissions for selling the farmer's crops, and when they are sold, he has the proceeds in his own hands with which to meet the farmer's drafts. This arrangement enables the farmer to get some benefit from our banking institutions, which is generally denied him. Credit, as conducted in the cities, is a good thing, but it is ruinous in the country, and it is particularly hazardous at this time, when so much demoralization exists amongst the masses, and the homestead and other exemptions cover three-fourths of the personal property of the State.—*American Farmer*.

[For the Southern Planter and Farmer.]

[We publish the following article of President Knight with pleasure, and fully concur with him in his views as to the necessity of publishing the Transactions of the Society and scattering them among our farmers for the benefit of both the Society and farmer. The Virginia State Agricultural Society of Virginia has been a power in the past, and under its present administration, its prospects are brighter than it has been since its organization.]

Your kind offer to publish any communication I may send you in relation to the affairs of the State Agricultural Society induces me to trouble you with a brief article on the proposed publication of a *Monthly Journal of Transactions*. It has always been the object of the Society to keep its work well before the people and never to *hide its light under a bushel*. Those who will trouble themselves to read its constitution and enquire how its means are spent will easily understand this purpose. The Society has large resources for valuable information of practical worth to its members and others, which should be made available in some convenient and proper manner. It has therefore been proposed by the Executive Committee to issue

a Monthly Journal, commencing not later than the first of the next year, of which a Prospectus has already been published and circulated throughout the State. Such of your readers as may not have seen this paper may be interested to know something in regard to the proposed publication. The first number will contain a brief history of the Society and its operations from its formation to the date of its issue; and afterwards the Journal will be devoted to the following subjects:

1. A full record of the proceedings of General Meetings of the Society and of the Executive Committee, together with all official reports required by the constitution.

2. An official record of all premiums awarded at the last *preceding* Fair which will be continued through the twelve numbers when the premiums of the next succeeding Fair will in like manner be reported. These reports will be *illustrated* by photo-engraved cuts of the premium animals, fowls, machines and implements, thus increasing the interest of the readers and exhibitors. To carry out this idea, arrangements will be made to have, *taken on the Fair Grounds*, photographs of the premium animals and articles, and as this work will be commenced for the first time at the next Fair (for which the services of a first-class artist will be secured) it is hoped exhibitors will bear the subject in mind.

3. All premium essays on subjects pertaining to practical agriculture, horticulture, mechanics, mining, &c., and all premium experiments on like subjects.

4. The best reported analysis of soils, crops, fertilizers, &c.

5. Statistics of crops and market reports.

6. Articles on the minerals of the State, their location, extent, &c.

7. Contributions and reports from the Associated District Societies of the State.

8. Communications and selected articles on agriculture, horticulture, fruits, stock-breeding, mining, mechanic arts and domestic economy.

It is thus seen that a *first-class* Journal, devoted to all the producing interests of the State, is contemplated; and the printed matter will be so arranged that the *Transactions* proper of the Society and of the Associated District Society, can, at the close of each year, be bound into a sufficient number of volumes, under the appropriate title of "Annual Transactions" for exchange with similar societies of other States, and distribution amongst the district societies of the State, and the State and other public libraries. Advertising sheets will be added for the benefit of those engaged in manufactures, merchandise, the production and sale of fertilizers and thoroughbred stock.

It is probable that the terms announced in the Prospectus will, at the next meeting of the Executive Committee, be reduced to the uniform price of *one dollar* per year, the object being to limit the subscription price to the actual cost of the publication.

The superintendents of public schools in the counties have been

appointed agents of the Society, and it is hoped that not less than *ten thousand* names will be left with these agents before our next Fair, so that the paper may be issued under the most favorable auspices immediately thereafter.

We shall, also, hope to have from these agents a large list of new life-memberships, and that the means of the Society, before the close of the present year, will be greatly increased for the practical and good work in which it is engaged.

W. C. KNIGHT,

President Agricultural Society.

ON THE USE OF GREEN CROPS FOR MANURE.

Your correspondent from Cumberland Co., Va. (page 311, Sept. No., 1874), gives us a lengthy article entitled "Depression of the Agricultural Interest—Its Main Causes, and the Remedy." I do not wish to be understood as criticising, in the least, your correspondent's well-written article. But the grievances set forth can best be remedied by an improved system of farming. I will only touch on one point of the subject, which I think is very important, and it is one which I have learned by experience, and after a tour of several hundred miles through Eastern Virginia. I am confident that it can be made to work, and, if your readers will try it, I think they will find themselves in a more prosperous condition at the end of a few years.

Mr. Holman puts his estimate at 5 bushels, or thereabout, as the yield per acre. Suppose, then, instead of sowing 50 acres in wheat, which produce, at 5 bushels per acre, 250 bushels, you sow only 25 acres. You then save 50 bushels of seed, which, I will say, was formerly thrown away, and is worth about \$60. The cost of breaking, harrowing and seeding 25 acres saved, say about \$75, which gives you now about \$125 saved. Take this amount, which will buy you about three tons of a good superphosphate, and drill this in with a good drill with your wheat. The ground should have been previously thoroughly prepared, and, if the season be favorable, the yield should foot up thus: 25 acres, 300 bushels, (instead of 50 acres, 250 bushels.) You then, instead of having the following season 50 acres to cut over, have only 25 acres—a considerable saving both in capital and labor. We now have 50 more bushels of wheat from 25 acres than we formerly had from 50 acres, to say nothing of the plight the ground will be left in for a crop of that good old standby, clover—the good farmer's *backbone*, if you please. Now take the capital and labor you saved in going over only one-half of the ground you formerly went over, and sow the remaining 25 acres, which were not seeded to wheat this year, in buckwheat and oats, say one bushel buckwheat and one-half bushel oats, mixed, per acre, as early next spring as the ground can safely be worked and seeded. In July it should be turned under with barshare plow. Sow imme-

diately again with buckwheat, using this time only buckwheat, which will be plenty thick for the purpose. The buckwheat should then be plowed under again about one week before seeding time, the ground leveled with harrow, then sledged, or dragged with a plank-sled, which is far better than rolling, and you are now ready for the drill. If properly put in, you may look for a crop that will give a fair return for capital and labor expended.

If some ashes and a little plaster, or air-slaked lime, can be sown with the wheat, all the better, especially if the soil is in want of pot-ash, as most soils are; the yield will be fully one-third more by the use of a liberal supply of the above mixture, (the quantity of which must be determined by the farmer himself, as some soils require more, others less.) A system similar to this will soon show the solvency of the farmer, and place him in a position, if he will use economy and a little self-denial, to balance accounts at the end of the year. We are well aware that the combination of farmers has proven to be a masterpiece in remedying certain grievances, but the farmer of the present day has to be wide awake to the importance of the improvement of his land, and as he feeds the soil, so will it feed him, and the host that look to him for food. No farmer will long find himself in a very prosperous condition, if he continues the ruinous practice followed at the present day, of cropping the land without giving it a proper return for the materials taken off. There are but few who make manure enough to even maintain the soil as it is, to say nothing of improving it.

Green crops, turned under, form a good basis for any crop to follow. For instance, I will relate, that after plowing green crops, preparatory to planting strawberries, raspberries and fruit trees, I was persuaded by the results thus obtained, to make further experiments. The land selected had been in corn the year previous, the four acres only making a little over 4 barrels of corn, all told. In the spring of 1874, the ground was broken up and sown in oats and buckwheat, mixed; in August, the whole was turned under, and 20 bushels of spent tan-bark ashes per acre were spread, and rye sown broadcast and harrowed in. The crop of rye was fully seven feet high. I did not measure the crop, but was induced by a neighbor to take some to our country fair, for which I was awarded the premium. From the same piece of ground, last year, we got a good crop of clover hay, with a fair prospect for another crop the coming season—and this on ground that was said to be barren. So much for cheap manuring. Turning green crops under is not a new invention, yet how few avail themselves of the opportunity. The farmer's motto should be to make all the manure you can, keep it under roof till wanted; feed your land to its heart's desire, and there will be a satisfactory dividend at the end of the year, after all obligations have been discharged.—M. C. CARPENTER, in *the American Farmer*.

Frederick Co., Md., Jan. 19, 1875.

CURING YELLOW TOBACCO.

[We hope Mr. Hatchett will excuse us for publishing the following private letter, as we know it will be of great service to our tobacco growers.]

Yours of the 9th instant is to hand requesting me to "revise an article of mine published in the *Southern Planter and Farmer* years since, on curing tobacco."

I know not that I can give you any further information than what is contained in that article. The method of curing fine yellow tobacco originated with Mr. Slade of Caswell County, N. C., who is still living, and his formula of curing tobacco is now spread *far and wide*. The mode of curing as published in the *Planter* in 1870, is the one practiced by Mr. Slade, and having spent much time in Caswell since the publication of my communication, and part of the time whilst the planters were curing their tobacco, I found that they still adhered to Mr. Slade's method, who universally obtained the highest prices 'till the planters learned his mode of curing; and if any improvement has been made on his mode of curing I know it not.

I find that you receive so many communications on the cultivation of tobacco, that I presume I cannot give you any additional information relative thereto. I prefer beds on which to plant tobacco, as they will hold moisture longer than a hill, and you can trim them down in half the time that you trim down hills, always putting a little loose earth around the plants after trimming them down.

Since the conclusion of our fanatical war, I have quit farming, as I am in my 81st year, and too old to labor, and rent out my farm; though if I had my former hands, I should still delight in farming.

I thank you for the back numbers of the *Southern Planter and Farmer*, which is an old friend, as I was a subscriber to it in by gone days for 10 years.

A man in this section made 2,600 pounds of orchard grass hay the past year from one-fourth of an acre of land.

Yours respectfully,

WM. R. HATCHETT.

CURING YELLOW TOBACCO.

Your correspondent, S. O. D., in the *April Planter and Farmer*, requests some person versed in curing yellow tobacco, to give his *modus operandi*, that others might profit thereby. Now, I do not profess to be an adept in this art, although I have had years of experience; but will give the practice of a most successful curer, who generally obtained the highest prices in Danville.

To cure yellow tobacco, you must use charcoal for the leaf; the stalk and stem may be cured with seasoned wood. The body of the barn should be made as close as possible. Many planters around Danville have cabin roofs on their barns, covered with boards, which permit the escape of heat much better than a shingle roof. When

you cut your tobacco, put eight plants on a stick, and place the sticks eight inches apart on the tier poles. If your tobacco ripens yellow, commence the heat, by a thermometer, at 90 degrees, and keep up this heat until the tobacco is yellow enough to commence drying the leaf; then raise to 100 degrees, and keep it up for three hours; and then to 110 degrees, and hold on to this heat till you see that the tobacco is well "*sapped*," and the tails begin to turn and get a little dry at the ends, (for you cannot cure yellow tobacco until you get the sap out of the leaf); then raise to 120 degrees, and keep up for three hours; and then to 130 degrees for the same length of time; and then up to 140 degrees, which must be continued until the leaf is cured. You may then take out the thermometer, and make your fires as hot as you please, to cure the stalk and stem *thoroughly*. A wet season will cause a redundancy of sap in the tobacco, and will exercise the curer's patience in yellowing and drying; early curing is the most successful, whilst the weather is warm.

By letting the doors remain open in yellowing tobacco it is not liable to get into a sweat; but should it get into a sweat with closed doors, open the door and let the fires go down, and after the sweat subsides, then go ahead.

If your tobacco ripens green, commence at 80 degrees, and keep it at that point for half a day; then at 90 degrees; and proceed as above. I have succeeded admirably by letting the tobacco hang in the barn till it was as yellow as necessary, and then starting the fires at 120 degrees, and proceeding as directed.

For a barn sixteen or twenty feet square, have three rows of fires, and three fires in a row. As soon as the tobacco comes in order, crowd it together as close as you can, or put it in bulk on the sticks, and let it remain until the weather becomes cool, by which time the color will be fixed; for if you let it get in high order soon after being cured, the leaf will turn red.

It was once the custom among the planters in the region of country around Danville, to keep their doors shut when yellowing and drying the leaf; but a planter in that section told me last year, that this practice was giving way to one more rational, which consisted in letting the doors remain open during the yellowing and drying process; in consequence of which the tobacco was not subject to so severe a sweat, and the leaf dried more speedily—the necessary result of the admission of air.

Relative to the open-roof theory of J. V. B., in curing tobacco, I have witnessed the experiment so far as the removal of several courses of shingles from the apex of the roof, but it was a failure.

I agree entirely with W. A. G., that tobacco is not an impoverisher, but an improver of the soil; for I have observed all my life—and I am now an old man—that corn, wheat, &c., succeeded better after tobacco than any other crop. The finest high-land corn I have ever made was on fresh land, which had been in tobacco the two preced-

ing years no manure having been applied to the land. Old tobacco lots were alike successful.

Years ago, some of my servants had a patch of tobacco in a bottom, at the foot of a hill, applying no manure, which had been in cultivation for at least fifty years; the tobacco was inferior, of course. The next year this field was put in corn, and I could tell the difference as far as I could see the corn; that portion on which the tobacco was grown being of a dark green color, and very thrifty.

An intelligent neighbor had previously observed to me that he thought we might put poor land in tobacco, giving it the necessary cultivation, then follow with corn, and the result would be satisfactory. The above fact sustains his views.

Respectfully,

W. R. HATCHETT.

Keysville, April 23, 1870.

CUTTING, SCAFFOLDING, HOUSEING, CURING AND PREPARING, SHIPPING AND STEMMING TOBACCO FOR MARKET.

In this region of country (the Upper James) we make almost entirely shipping and stemming tobacco, and the following system is only applicable to the cultivation of these two varieties. This writer has been a tobacco grower for thirty years. He has noted and tested carefully the numerous changes and improvements that have been adopted from time to time in the cultivation and management of tobacco, and he has finally settled down upon the following system as the *best*, in his humble opinion *at least*.

First, as to the proper time of cutting:

Tobacco should not be allowed to become dead-ripe before cutting. The proper time is when the plant is just fully ripe. When cut dead-ripe, the leaf will be a little heavier, it is true; but is apt to be coarse, rough, brittle, ragged, and sometimes blistered. On the contrary, when cut just ripe, the leaf will be clean, supple, elastic, of fine texture, and much better suited for stemming purposes,—the stemmers and manufacturers both requiring a tough leaf.

The tobacco having been cut, I greatly prefer hanging and scaffolding in the field. The main objection urged against the plan is, that it is troublesome and expensive making the scaffolds thus. Nothing valuable can be accomplished without labor and attention, but if the necessary arrangements are made in advance, it is not so troublesome after all. I use stobs and pine poles in making the scaffolds, and these materials are all gotten and put in place before the day of cutting. To make a quick and easy job of this operation, I take a couple of men, with maul and wedges, axes and cross-cut saw, and go into the woods. Having selected a tree that splits easily, it is cut down and sawed into blocks $4\frac{1}{2}$ feet in length. These are split into stobs, which are sharpened upon the spot. In this way a heavy wagon-load of these stobs can be prepared in a couple of hours.

They are then hauled immediately to the tobacco field, and placed where they can be had conveniently. With these all in place, the scaffolds can be put up by a couple of hands in a few minutes. The scaffolds being once made, there is no more trouble. I should have stated, in the proper place, that the poles are gotten pretty much in the same way. The wagon and a hand are taken into the woods, (old field pines) the poles gotten 12 feet long, and hauled and put in place with the stobs. In putting up the scaffolds, care should be taken to arrange the poles so that the tobacco sticks will range North and South, in order that the sun may shine between the sticks in the middle of the day.

After the cutting has been completed, then stobs and poles are all gathered together and put under shelter for the next season, and, if taken care of, will last several years. In hanging the tobacco, the plants should not be crowded on the sticks, and space enough should be left between the sticks to admit the air and sun freely.

If the weather be favorable, the tobacco is allowed to hang on the scaffolds from three to four days. It is then hauled to the tobacco house and housed and fired three to four days, *moderately*.

This finishes the curing process, except that it is fired afterwards occasionally, when the weather becomes damp and the tobacco too soft. When the weather is open, the doors of the tobacco-house should be kept open during the day, and a free access of air allowed.

I prefer always making my cuttings during the first part of the week, in order that the tobacco may have the benefit of three or four days' sunning, and be ready to be housed the latter part of the week.

I claim for this plan several very decided advantages over the one of cutting and putting immediately in the house.

1st. More tobacco may be cut per day, and better secured.

2d. The sunning process toughens and lightens the plant, so that it can be hauled up and housed with much less labor, and no risk of bruising.

3d. The whole force of the sun's rays falling upon the stalks and the largest parts of the stems, these parts of the plants, which require so much firing, are cured in a great measure by the sun.

4th. In the firing process, the heat from the fire is brought to bear mainly upon the ends of the leaves, and the part of the plant becomes perfectly dry before the other parts are half cured.

5th. There is not half the danger of burning the house.

6th. It takes just about half the time and half the wood to effect the curing. In other words, the heat of the sun and the open air are utilized and made to do half the work of curing; thus consequently, economizing one half of the expense.

When the tobacco is cut and put immediately into the house, it requires from six to eight days hard firing. Under the scaffolding system, three days are generally sufficient. But it may be objected that there is danger of the tobacco being caught in the rain. I have had my tobacco caught in the rain frequently, but I have never dis-

covered that it was at all injured by it. An ordinary rain falling upon the tobacco while it is in the green state does not injure it in the least. A very protracted raining spell might do some injury; but these spells occur very rarely during tobacco-curing season. When tobacco is allowed to remain on the scaffolds until it has been partially cured, it may be seriously injured by alternate showers and sunshine.

The crop having been well cured, the first good season should be availed of to take it down and put in bulk for stripping. I prefer a warm season for this operation, and the tobacco should be in soft order, otherwise it will become too hard when the weather gets to be cold. In bulking the tobacco, there should be only two layers, the leaves lapping in the centre, and the stalks remaining on the outside. The stalks should never be placed in the centre of the bulk, as there is always danger of their heating.

Now commences the most important operation in the cultivation of tobacco—its preparation for market. The first step in this direction is to secure the services of a sufficient force of good and reliable sorters and strippers, particularly the former. Very few negroes are sufficient judges of tobacco to become good sorters, and they should, in the start, be well instructed in their duties. "The law bearing upon the case" should, in the beginning, be well laid down, distinctly understood, and strictly enforced, at all hazards; for a little neglect here might cause the loss of half the year's work. The tobacco must be well assorted as to quality, length and color, and care taken all the time to keep separate. Nothing looks worse than a bundle with long and short leaves mixed in it; or with dark and bright ones so mixed. In the process of assorting, the sorter should be required to open every leaf and run the hand quickly but gently down it, with the fingers on the outside, and the thumb on the inner side, in order to stretch it out to its full length. I usually divide my tobacco into four and sometimes five classes. In the stripping process, the tobacco should be neatly tied up, well sized (that is, all the leaves in the same bundle should be of the same length) and kept straight. The bundle should be of medium size. The number of leaves to be regulated by the size of the tobacco. In ordinary size tobacco, about six leaves will be about right. A short head looks the best, and about one inch is the right length.

In every step of this process of stripping, the constant presence and attention of the master is indispensable. He must be constantly on the alert, making the round occasionally, and examining the work of every hand, to see that it is well done. I always engage my hands by the day, so that they may have no inducement to hurry over or slight their work, as they are apt to do, when engaged to work by the hundred pounds, or the hundred bundles.

It is very difficult to get ordinary hands to size the tobacco well, and have the leaves of the bundles of uniform color, and it requires much firmness and the strictest attention to get them to do it.

During the last few years, I have adopted the plan of prizing the inferior grades, whilst the stripping is going on, and I like it very much, as it saves some labor, and gets it out of the way; but in order to do this, the prizes should be in-doors, and closely connected with the stripping-room. At the close of each day, the inferior grades are taken to the prize and put right into the hogsheads. Platforms having been previously prepared, the higher grades are carefully straightened out and bulked down, one bundle at a time. As soon as the stripping has been completed, then the bulks are covered over with plank and heavily weighted. After remaining under weight a few days, the tobacco is ready for prizing. I never re-bulk. If the work is well done at first, there is no necessity for it.

When the prizing process commences, three hands are put at the prizes, and a couple of the best judges of tobacco are put in the stripping-room to re-assort the top from the bulk.

For this purpose, a couple of light boxes, large enough to contain 50 pounds, are provided. Then two hands are required to take each bundle separately and examine it carefully, and every inferior leaf found in a good bundle, or a yellow one in a dark bundle, or a short one in a long bundle, is taken out and thrown aside. The bundles thus assorted, are run through the hands, straightened out and laid carefully in the boxes, which, when filled, are taken to the prize.

It is all-important to have the tobacco of uniform quality, length and color, and these different grades should never be put in the same bundle, or even in the same hogshead, if it can be avoided.

Here, in this region of country, where we make exclusively the shipping and stemming varieties, our best policy is to manure our lands heavily and make large tobacco.

There is much economy in this, both in time and labor. It requires no more labor to cultivate a plant weighing half a pound than one weighing one-eighth of a pound. Long tobacco well handled, always sells well, whether the quality be good or bad. With this idea in view, I always cultivate the "white stem" variety, because it is a heavy tobacco, and has a very long leaf, and it is for this reason, also, that in the process of assorting, I require the leaves to be opened and drawn out to their full length. The tobacco leaf is very elastic, and may be thus elongated several inches.

One word about the time of selling. Here, where we are convenient to market, and can ship our tobacco at any time, we find it best, generally, to put our crops in market as soon as possible, and we are generally able to do this by the first of March. When this is done, it is prized from the winter bulk, and not hung up and ordered. When the tobacco is large, *long*, and suitable for stemming, and can be put early in market, it is best to have it moderately soft, as it facilitates the stemming process.

If, however, the crop cannot be placed in market sooner than 1st of April, it should be put in safe-keeping order.

There are some very decided advantages in being able to sell early,

and in winter order. The tobacco weighs more, all the time and labor of re-hanging, ordering, &c., are saved, and the crop is gotten out of the way for subsequent operations. And in addition to all this, nine times out of ten, it brings just as much money.

Before closing this article, allow me to say a word to tobacco-growers, everywhere, touching the next crop. Now that prices are ranging high, do not fall into the common error of over-cropping, and thus glut the market with an inferior article, and bring down prices again. But cultivate moderate crops, manure your lands well, work them thoroughly, and in this way make a good article, and keep up prices.—UPPER JAMES, in *American Farmer*.

TUCKAHOE FARMERS' CLUB.

The club met this day at "Linden," the home of your reporter. There was a full attendance, and in the absence of any lengthy or formal discussion—a very pleasant and profitable day was spent in a general intercourse and interchange of opinion on the various subjects now especially claiming the farmer's attention.

The importance of our hay crop cannot be overestimated, and the next week brings with it that important harvest. With a well stocked barn of good clover hay, how much more cheerfully the farmer looks to the approach of the winter season, visions of fat horses, ever ready for work, and an abundance of rich milk and butter instinctively appear. We conclude therefore that our clover should be cut when the stalk is green and succulent, before the hard fibre appears and when some of the blossoms begin to brown. Some of the club contended for the curing by the old method of the "hay cock" and several days drying in the sun, but your reporter, sustained by a few, contended for the cutting and turning in the morning, and the carting to the hay-house in the same afternoon and packing away with free use of salt, and thereby avoiding the hardening by exposure, and the loss in the consequent shattering of the bloom. We were suitably admonished to strain every nerve, get through our corn, plant our late potatoes *deep* into the ground, be ready to cut our winter oats and wheat both in the "stiff dough state" and both by the 20th of this month. So there is no time to be lost. To increase this work and to provide against a necessarily short crop of hay, as well as oats, your reporter advised the sowing now (or as late as July) of two or three acres in Hungarian grass. A fine growth of it already well covering the ground was here shown to the club, and it may not be too egotistic to say that it, as well as the winter oats, clover, &c., of fine growth, being inspected by the club, they expressed gratification and approval.

At our next meeting we may give you an essay on Hungarian and other grasses in July. Excuse this meagre report.

J. A. LYNHAM, Reporting Secretary.

Henrico county, Va., June 3d, 1875.

CONFIDENCE NEEDED.

All over this fair land of ours one universal wail is going up in regard to the universal dearth in business and the stringency in money matters, and grown men (who consider themselves wise) are each asking the other what is the cause of this condition of things, and why don't the times grow easier and better, as if it were a mystery hid beyond the ken of man. And again the wail goes up universally everywhere that labor is not remunerative and cannot be relied on, and that farming does not pay, &c., &c. I am of the opinion that there is a cause for the existence of everything good or evil that does exist in this world. And to my mind the cause of both evils are the same, and that cause is the want of confidence of men in men, growing out of villainy of man to man, produced by the examples of what used to be called our servants, but now our rulers at Washington city, in the bad and villainous government of the people of this country since the close of the war in 1865—coupled with the demoralization of army life and army influences, oppressions wrong and vile, long continued as they have been upon the people of the South, have produced in the South a reckless disregard of and distrust in the laws that have been enacted to make the negro a white ruler and the white man a black slave, and to accomplish these unnatural and unjust purposes, no limits have been set by law beyond which those in power have not gone in injustice to carry out these unnatural impossibilities. These things, and these alone, have by degrees shaken, blasted, and uprooted confidence to the extent we now see and lament, and those who have a spare dollar will let it rust and rot in their pocket rather than risk it in other hands at legal, or in many instances at illegal interest. *Cheating, prevarication and lying oppressions* by this government have blotted out love and honesty for, and implanted in the heart of the people hatred and dishonesty in their stead; and just this and nothing else is the cause of all which the people this day complain of, and until this unnatural condition of things is changed, there can be no prosperity nor abiding peace in this land.

G. H. SENER.

LETTER FROM FLUVANNA.

I am surprised how some men can sit back, perhaps in contentment and ease, and write such nice plans how we farmers should manage, and what we should do. I believe the majority of farmers do the best they can, and at that it is a poor do with some. As to myself, I delight in nice farming; but I find it very difficult to carry it out at all times. Give the farmers reliable labor, and they will soon put a new face upon agriculture. I am cultivating a rented farm on the James. I work three regular hands, with myself, hiring some extra day labor. Last year I made 710 bushels of wheat from a seeding of 60, and 440 barrels of corn, oats and hay in proportion. I cultivated no tobacco, owing to making a sacrifice in a nice crop the winter

before. This year I am cultivating 35,000 hills; planted 8,000 the 25th day of May, which is now spreading the hill, and I am to-day scraping down. I listed my high land and checked it, hilling it also, as I believe, in a nice preparation for tobacco. I can, by checking, work it both ways, requiring less hoe work. I finished planting my crop the 3d day of June. I think I have now, the 12th, a perfect stand, with any amount of plants left over. I always burn in the fall if I can, and hoe deep, and sow the seed at the same time. I find that burning the same bed the second time is much safer for forward plants. I burned over this year a last years bed of 350 square yards and am sure I could have planted out of that bed 50,000. By the 15th of Jan. I sowed old ashes freely, as it keeps the plants from burning. I see some of your subscribers writing very beautiful letters about how tobacco should be managed from the plant-bed to the hogshead. It is very nice to read, and equally as nice to write; but planning and executing are two different things. I have had some experience in tobacco, and think the two most important items in cultivating tobacco, are—first, good size, plant in time; and second, is a nice preparation as land in nice order retains moisture longer than land in a rough condition. We have too many rough farmers. I find the old maxim true, “that what is not worth doing well is not worth doing at all.” I believe tobacco should be worked deep. I am going to run a new ground coalter four times in the rows as deep as it will go, and after every rain the crust should be broken, Secondly, corn. I have this year only 35 acres planted in corn; it is now an average of half leg high, and very clean. I shall get over to day putting the dirt to it, and properly thinned. I shall commence laying by next week. I always lay by my corn by the last day of June if I can; and think, with a common season this year, to make 325 barrels. I seeded last fall 50 bushels of wheat—one half Wicks, the rest Lancaster; think I shall make 650 bushels if I can save it. I commenced seeding the 23d of September, and finished the 9th of October. I find, from one year to another, that forward seeding is the best. Crops in this county are generally sorry.

B. H. B.

Fluvanna county, Va.

WHAT I KNOW OF LONG WOOLS.

What I know of long wooled sheep, and short wools, coarse wools, or fine wools, is that neither will thrive and be profitable, except they are provided with the proper food to develop their qualities.

Care is the first essential quality in a flock-master. He should see his sheep every day in the year. During the pasturing season he should salt and count his flock twice per week and see that none have the scours. If there are any so affected, they should be removed from the flock and fed on dry hay and oatmeal for a couple of days. During heavy rains sheep should be provided with shelter,

either sheds in the pasture that the sheep can use at their own pleasure, or when sheds are not provided, the sheep should be brought to the stock barn and housed until after the storm. When grass begins to fail they should be fed either sowed corn, pumpkins, roots or grain.

It is poor economy to allow sheep to half starve and lose flesh in the fall. From October 1st until January is the trying time. If well cared for during that period, ordinary care will keep them doing well the rest of the year.

When the hay is harvested the clover hay should be cut in the blow, well cured, so as not to must, and put in the sheep barn, or where it can be got at any time.

When the sheep are brought in for wintering, feed them the clover hay until they are wanted to eat hay; then other hay can be fed to them once per day. They should have also a daily feed of oats, at the rate of one quart to every ten sheep for fine wools, and double that for coarse wools. A box that will hold a peck or more should be fastened in the shed low enough for a sheep to eat from easily, and fine salt kept continually in it, never letting the salt get used out. It will need replenishing every few days.

When the winter has well set in and the sheep have acquired good appetites, add to your oats one bushel of peas to three bushels of oats for breeding ewes; for fattening sheep corn is better. Corn should never be fed to breeding ewes; it has an overheating tendency and produces a congestion of the bowels in the lambs; thousands die every spring, from that cause alone, that might have been raised if the ewes had been fed peas instead of corn.

Provide water in the yard that the sheep can have access to any time of day. Do not compel them to quench their thirst by eating snow; it is cruel, niggardly and poor economy.

Be kind to your sheep; use no loud and boisterous language nor allow others to do so. Never frighten them. Treat them kindly and they will show an appreciation of it and will pay you in wool and mutton, more than an hundred fold.

Study the habits of your sheep. Learn from them what they want and provide for their wants intelligently, and do not rest content until every lamb can be raised and every sheep produce for you the most and best staple of wool of which it is capable. Then, when you have attained that perfection, jot down your experience and give it forth to the world to guide others in their attempts; and, though they may reach a still more exalted position, you will be conscious of having performed a duty and be remembered as a benefactor of mankind.

MILES H. DELONG.

Washington Co., N. Y.

MELLOW SOIL AROUND TREES.

Unless the surface of the ground is mulched around young trees

over an area of six to ten feet in diameter, the ground should be kept clean and mellow. Every farmer knows that a hill of corn or potatoes will not amount to much unless cultivated, and yet there are many who will neglect to give the same care to a tree which is worth a hundred hills of either of the former. In rich soil trees may grow rapidly without cultivation, and no amount of grass or weeds will retard them; but there are other things besides growth to be looked after. If the weeds and grass are allowed to grow up around the stems of apple, peach or quince-trees, the bark will become soft near their base by being shaded, and thereby be in a suitable condition for the reception of the eggs which will eventually become peach or apple borers. Take any dozen young apple trees in sections where the apple-borer is abundant, and allow a portion to be choked with weeds and the remainder well cultivated, and then watch the result. From our own experience, we believe that the chances are nine to one in favor of those cultivated being exempt from this pest.—*Nat. Agriculturist*.

MANURE FROM A TON OF HAY.

I see in the *Rural New Yorker*, a question from H. Ostrum, as to what is the value of the manure from a ton of hay. It is impossible to give him an answer, as to how much it is worth to him, individually, as that depends on how cheap he can make or procure it from other sources. But I will attempt to give him the value of it in proportion to commercial fertilizers, and that made from some other farm products, as derived from the experiments of J. B. Lawes, Rothamstead, England.

Clover Hay,	-	-	\$9.64	Bran wheat,	-	-	\$14.50
Meadow "	-	-	6.43	Corn,	-	-	6.65
Wheat straw,	-	-	2.68	Oats,	-	-	7.70
Oats "	-	-	3.90				

He must remember that this is not the value of a ton of the manure, but the manure produced from the consumption of a ton of the article. They may not really be worth this amount to Mr. Ostrum; but if he contemplates purchasing fertilizers, then they are worth this much.

It would be well enough to state that the bran owes its increased value over clover hay, to the presence of phosphoric acid, the most needed and most valuable article in our fertilizers. Of all the articles we can the least spare, at the prices generally prevalent, if manure is any item, is, first, bran, and secondly, hay, especially clover.—J. H. B.

THE sons of Stephen A. Douglas are at last in financial luck. A recent decision of the court of claims gives them \$267,000 on an old cotton claim. Cotton is still king with Robert and Stephen Jr.

WOMEN, AGRICULTURE, AND THE GRANGE.

I wish that our American ladies would adopt one of the few aristocratic tastes and habits which sit so gracefully upon republican women, and which would be of equal advantage to the interests of agriculture, and to their own delicate physical organizations. A great deal of cant is uttered in these days about the mission of woman, but whenever I hear an attenuated, dyspeptic female talking in this wise, I feel sure if she were to become a member of a Grange, and attend its meetings with regularity, take an interest in the discussions, and what she learns by theory, put it to practice in her kitchen and flower-gardens, I feel sure it would put her on the track most useful for herself and society.

When Rome was young and virtuous, the garden was always placed under the care of the daughters of the family. "In Sparta," the women, fit to be the mothers of heroes, cultivated the soil; whilst the men were fighting the battles of their country. Indeed, from the earliest period in the annals of our race, woman has aided by her labors in bringing agriculture to a state of perfection.

The laws which "Osiris" gave to "Egypt," were not as valuable to that country, as those precepts in agriculture, those instructions in embankments, irrigation and drainage which Isis, his "Queen," gave the "Egyptians," and which enabled them to derive so much benefit from the fertile valleys of the "Nile." "Ceres," deified by the Greeks, made her people acquainted with the use of wheat, and the mode of cultivating it. I believe to an Empress of China, we are indebted for the mulberry tree, and the rearing of silk worms. Women of late years have demonstrated their capacity of shining in many spheres, once considered the peculiar province of man.

Miss Herschel has discovered comets; Mrs. Somerville laid open the mathematical structure of the universe. Some have analyzed the relations of nature in the laboratory, and others investigated the laws of social relations. With such a grace, and variety of power, may I not argue the most beneficial results to agriculture, if the women of our country, by their sympathy, encouragement and co-operation, by their studies and counsels, would prove themselves, as did the women of old, helpmates to him whom God has ordained to cultivate the earth.

Let us hope that our organization known as Patrons of Husbandry, which has spread with such rapidity through the country, will result in attracting universal attention to the encouragement of agriculture. While nine-tenths of the American population live by agriculture, the word can scarcely be found on the statutes of the nation. There is no end of the provisions for the protection of manufacturers, and corporations—questions which have occupied as large a space in public attention as if nine-tenths of the population were engaged in that vocation instead of agriculture.

We hear of large appropriations being made by Congress for nearly every conceivable purpose, yet not one dollar has been given

for the direct encouragement of agriculture, a calling by which our countrymen live, and upon the success of which in America, the world sometimes depends for deliverance from starvation.

Let the Grangers throughout the United States see to this, and if the matter cannot be remedied by our present representatives, then see that we have a representative that will attend to it. F. W. C.

Louisa county, Va., April 19th, 1875.

THE LAST STATE FAIR AND THE NEXT.

One thing I am not able to understand is why the premiums on short horns should be higher than on other thoroughbred cattle. Three fourths of Virginia is not suited to the rearing of that breed; yet on referring to the premium list for 1874, I find the Society gave as premiums on best bull, short horned breed, \$50; best cow, short horned, \$40, and so on; yet a little farther on I see first premium on Devons, Ayrshire, Alderney, Herefords, and all other thoroughbreds—Best bull, \$30; Best cow, \$25.

Now I ask why is this discrimination in favor of the short horns? when only a small portion of Virginia is suited to the raising of that breed? We in a short grass section have to breed cattle more suited to our grasses, and justice to the breeders of other cattle in the State demands this change, unless the Society wishes to be run in interest of short horns to the exclusion of all other breeds.

The last exhibition of the Virginia State Agricultural Society, whilst fully equal to any which has preceded it, when regarded as a whole, was certainly inferior as an exhibition of the products of the farm, the flower garden, the kitchen garden, and the orchard. There were but few exhibitions in this department, and those chiefly individuals residing near the city of Richmond, and hence the fact developed by the list of premiums awarded, that nearly every prize was taken by persons living in counties contiguous to that city. It speaks well for the people in that section, but poorly for them in other portions of the State, as this ought not to be, and I hope will not be the case this year. It is discreditable to the farmers, gardeners, and people of the State at large. There is no department of the Fair which could be so well supplied and with such little cost and trouble to the exhibitors. It is a matter of considerable expense, trouble and annoyance for breeders of stock, in a distant portion of the State, to bring to the Fair their stock; but it would cost comparatively nothing to bring a pot of pickles, a jar of honey, a dozen or so of fine apples, a bushel of superior potatoes and turnips; a pound of nice butter, a cake of home made cheese, a bottle of domestic wine, and such like articles. Not only could these things be readily brought to the Fair, but could as readily be procured.

It is expected that some of the largest breeders will have some of their fine stock on exhibition, and also the manufacturers a variety of their wares. Yet nine-tenths of the people who attend an Agri-

cultural Fair, appear to think that their whole duty is done when they come to look upon what is exhibited by others. This is a most erroneous view to take of the matter. We have very successful Fairs, and our Society is well managed; the grounds are large and commodious, and in every way well improved.

There is one great annoyance that might be dispensed with; it is the introduction of negro minstrels, fat women, big babies, four legged children, deformed animals, riding nuisances, &c., &c., to the annoyance of visitors, and to the disgust of those who believe that such exhibitions should not be tolerated at such a place. Part of the grounds become worse than a beer garden, and the noise and confusion are enough to drive quiet people out of the grounds. Besides, the exhibition distracts the attention of the young, and some older people from the real object of the Fair, and tend to educate people in the wrong direction. They degrade and debase rather than instruct and improve. I hope such abominations in future will be excluded from our Fairs.

F. W. C.

LUCERNE.—This invaluable plant stands by far at the head of all forage plants for the South. Its uses are for soiling and hay. It grows in all parts of the State where the soil is dry and rich. It is much less injuriously affected by sand in the soil than clover. Ten pounds of seed are sowed to the acre. It is sometimes sowed broadcast and sometimes in drills. Where land is perfectly clean the broad-cast method is perhaps the best. But where land is at all foul, drilling is preferable, as it can be cleansed with a narrow plough. The land should be broken with a two-horse or three or four-horse plough, and in the same furrow followed with a subsoil plough. The roots of Lucerne will penetrate three to four feet in depth. The ground should then be manured very heavily with a fertilizer which has in it no seed of weeds, either perfectly rotted barn-yard manure, or a fertilizer in which there is a little ammonia and a large proportion of potash, phosphate and sulphate of lime. Lucerne, according to Ville, draws more ammonia from the atmosphere than any other plant whatever. It therefore enriches land. The Lucerne on this farm—some five acres—was destroyed by the grazing of the Federal horses and cattle during the war. The roots which were as large as moderate sized carrots, withering, the ground was left almost honey combed. It was as loose as an “ash-heap” vastly improved in fertility.

If Lucerne is cultivated on a small scale for soiling work horses, a lot should be selected adjoining the stable. The Lucerne cut one day should be left to wilt and used the next day. From the middle of March or first of April there will be no further use for corn fodder during the season. It will be found that the horses and mules will eat all the Lucerne in the trough before they touch the corn. In fact a horse will do light work, or answer for riding on Lucerne without corn.

Lucerne makes the very best of hay. On very rich land it can be mowed five times during the season, yielding a ton at each cutting, and sometimes more. This is five tons to the acre. Ten acres would yield fifty tons. This at three dollars to the ton would be fifteen hundred dollars. A good mower will cut these ten acres in a day. Is there any other plant which grows out of the ground that will pay as well? Observe, the whole labor employed after the first cost is one day's work of a mower and the necessary labor of curing and hauling to the barn. How much labor does it take to make fifteen hundred dollars worth of cotton or corn? Yet with this possible, nay, practicable, extraordinary product, the Western and Atlantic railroad brought down between one and two millions of Tennessee and Kentucky hay last year, and the wharves of our ports were loaded with Northern hay. When shall we learn wisdom?

There are some English and some Northern grasses which do not thrive with us. But neither England nor the North can grow Lucerne, one, because it too wet; the other, because it is too cold. If we could raise no other plant for hay than Lucerne, we still should never buy a pound of hay grown out of the State. It alone would be ample for all our wants.

Lucerne should be cut very close, leaving as little stubble as possible. It sometimes turns yellow. This is the work of an insect and the Lucerne should be immediately mowed over. The field is ready for the scythe when the blossoms begin to appear. If left longer it becomes woody.—*Extract from Prize Essay, in Southern Farm and Home.*

OUR WHEAT TRADE.

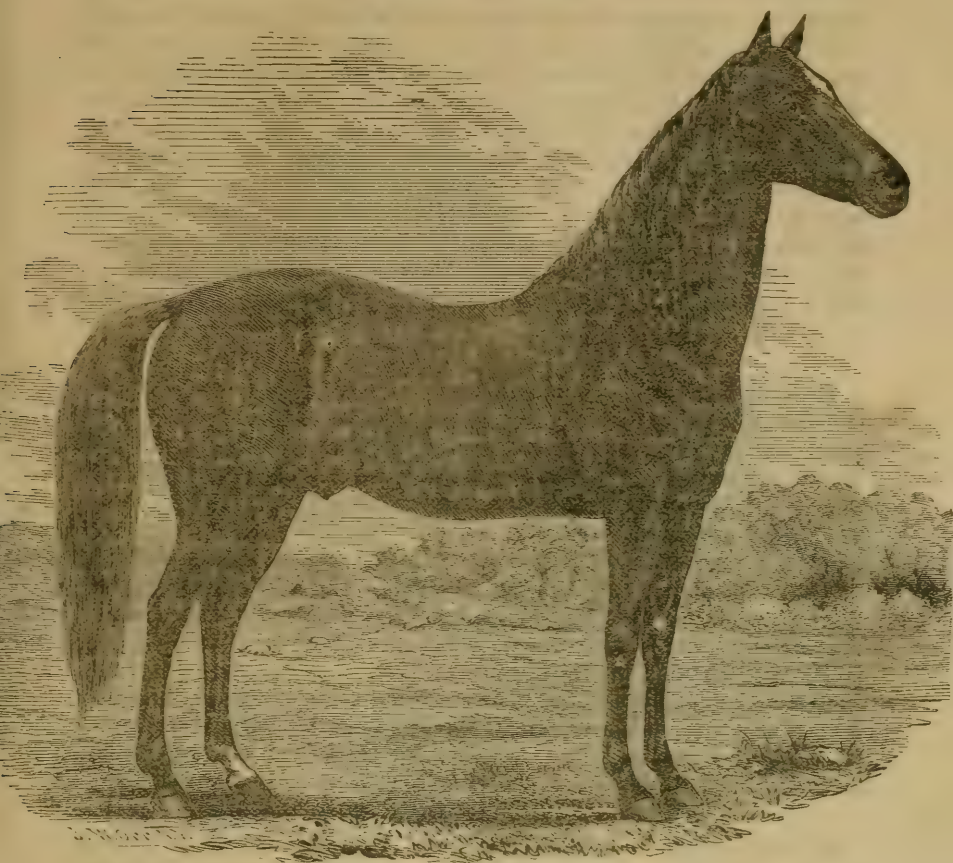
The accumulation of the extraordinary stock of five millions of bushels of wheat in Chicago is, we believe, an unexampled phenomenon in the history of the grain trade in this country. Now, that a "break" has at length been reached in the prices at which wheat has been held in the interior, there has been a brisk revival in the shipments from this and other ports, and prices ought to reach what may be called their normal equilibrium. The "grasshopper scare," which has been carefully nursed for speculative purposes, has lost any further power to influence the market, and the largely increased area of land under wheat in northwestern Nebraska, and Kansas, and elsewhere, joined to the most favorable reports of the appearance of the crop in these districts, has convinced the majority of producers of the folly of holding any longer for a rise.

The possibilities of our wheat exports during the next three months can be most correctly gauged by a reference to the English demand, and to the extent to which it has already been supplied. For the harvest year beginning Sept. 1, 1874, and ending August 31, 1875, it was estimated by the best English judges that the demand would be 22,700,000 quarters. The yield of the last wheat harvest of the United Kingdom has been, with the nearest attainable

ble approach to accuracy, set down at 13,700,000 quarters. The importation required for the twelve months ending August 31, is therefore nine millions of quarters, or seventy-two millions of bushels. During the eight months between September, 1874, and April 30th, 1875, the United Kingdom had already received nearly forty-six millions of bushels of foreign wheat, leaving twenty-six millions of bushels to be supplied during the four months between May 1, and August 31. Of the forty-six millions above noted, twenty-five and one-half millions of bushels were received during the closing four months of the last year, and twenty and one-half millions during the first months of this year.

The question which immediately interests the wheat-growers of the United States is what proportion of the British demand is likely to be drawn from this country. Of the twenty and one-half millions of bushels of wheat imported during the past four months of 1875, nearly twelve and one-half millions were drawn from the United States. Of the twenty and a half millions imported during the last four months of 1874, a somewhat larger proportion was contributed by this country. But taking the ratio maintained January and the end of April, our proportion of the British wheat imports up to the end of August ought to be about sixteen millions of bushels. The present stock of wheat in the country "in sight," as it is called, that is, practically on the market, is not less than ten millions of bushels. In the face of a more extensive demand last year, stocks were about two millions of bushels less.

Trustworthy estimates about the amount of land under wheat this year in the United Kingdom are not yet forthcoming. As the acreage of 1874 was 3,833,000, or pretty near the maximum area of available wheat land in that country, the British harvest of this year cannot be perceptibly affected by the increased quantity planted. The average yield per acre of British wheat was, last year, thirty-one bushels, or one and a half bushel above the "standard average." As the average yield of the last nine years has been one and a half bushel below the standard average, it may fairly be expected that the total yield of 1875 will fall short of that of 1874. The increased consumption consequent upon low prices must also enter in the question of future demand. Add to these considerations the fact that all our rivals in the British wheat trade, are, with the exception of Russia, practically out of the race. Even Russia, which used to send to England twice as much wheat as we did, has, even under the stimulus of a superabundant harvest, sent during the last eight months but a little over a third of the amount of our imports. While, therefore, the prospects of our export wheat trade cannot be called brilliant, they are certainly re-assuring. Only producers must make up their minds to a pretty long period of almost stationary prices, while they may reasonably expect to find some compensation in the increased purchasing power of their money.—*New York Times*.



TROTTING AND RIDING STALLION, BLACK HAWK.—Black, foaled in Vermont, 1850, out of a fine Black Hambletonian mare, and by Hill's famous old Black Hawk, he by Sherman Morgan, in 1833, he by the original Morgan in 1808 or 1809; he by True Briton, in 1793. Black Hawk is a half brother to Ethan Allen, Ticonderoga, and most of the best trotters of that day. Owned by

Maj. S. W. FICKLIN,
Charlottesville, Va.

WALKING VERSUS TROTTING HORSES.

A writer in the *Prairie Farmer* complains that all the premiums offered at agricultural fairs for the performance of horses go for trotting or running and none for walking. He says the various agricultural societies "say nothing of walking, which is the gait farmers are most interested in. I have often wondered why that was over-

looked, and had hoped that some one would bring it before the societies. What benefit is a race horse to a farmer? If he wants to run or trot him for premiums or stakes, it will not do to work him as farm horses have to work. Besides, fast horses, generally, are not able to stand heavy work, and are not apt to be extra walkers. What the farmer wants is a close-made, muscular horse, weighing 1,000 to 1,200 pounds, that can walk at least four miles an hour with a cultivator, or at that rate while crossing the field. It costs no more for a hand to drive a team that will plough three acres per day, than it would to drive one that would plough only two acres; and a good hand, or one that tries to earn his wages would."

CATTLE FOR FATTENING.

S. W. FICKLIN, in an address on feeding cattle to the Belmont club of Albemarle county, Virginia, says he has no hesitation in giving the preference to short-horns, and their grades, in *all that constitutes* the animal suited to a fair grass region of country, except that the Devons and their grades excel all as work oxen for activity, uniformity of style and color.

With the same keep, they will not mature by a year or more as the short-horns and their grades will do. The mode to fatten, and the age, is very varied, depending upon the localities and the breeds that can be raised or purchased, the aftermath of meadows and late pastures in the fall, and how the farmer may be situated with forage, shelter, age of animals, and their capacity to accumulate flesh and fat; if at a mill, or convenient to one, and the *certainty* that the animals get the meal and bran intended for them, and with regularity, care and kind treatment.

BUTTER PRODUCT OF A SHORT-HORN HEIFER.—In looking over your paper from week to week, one would suppose that the Jersey cows were ahead of all other breeds in the State for making butter. I think it is a great error; I think there are other breeds that will make more butter on less provender and give more milk than the Jerseys, and make butter of as good quality. I have a thoroughbred Short-horn cow, four years old last March, that made in one week last January, eleven and three-fourths pounds of as nice butter as was ever produced by a Jersey cow. It was but seven minutes churning by the clock. Her feed was but four quarts of shorts per day, and as much good hay as she would eat. If any one has a Jersey heifer three years old past, that will beat this I would like to purchase her.—*M. L. Wilder, in Maine Farmer.*

IN Nelson Co., Va. a few days ago, a gentleman who had lost several sheep by dogs, put strychnine in large quantities upon one of the carcasses, and the next morning found thirty-one dead dogs in the field, the farthest one being less than one hundred yards from the dead sheep.

IN the last twenty years the product of butter and cheese in the United States has been doubled. Last year it amounted to 650,000,000 pounds of butter and 200,000,000 pounds of cheese, of which more than one-fourth of the butter and nearly one-half of the cheese were made in the State of New York. The cheese factories number about 2,000, employ about \$5,000,000 capital, and use the milk of three-fourths of a million cows. The *American Grocer* states that the production this year is likely to greatly exceed that of last year, but does not believe that the production will even exceed the demand. The cheapening and improvement of butter and cheese by artificial means will tend rather to overstock the market.

CURE FOR KICKING COWS.

A method which will break the most vicious cows from kicking, and which should supersede the cruel practice of beating and whipping, and is the work of but a few minutes, is as follows: Take a strap the size of a common bridle rein and buckle tightly around the cow (while milking), just forward of the bag. This, practiced a few days, will effect the desired result, as we are aware from actual experience.

SOUTH-DOWN SHEEP.

This valuable sheep has been known and bred a long time in England, where it has always maintained the character of a hardy animal, yielding a medium quality of wool, and furnishing mutton of a superior flavor. Mr. John Elman, of England, according to the history, took them thoroughly in hand, and founded a flock which has been the source whence all the best blood has since been derived.

A good South-Down is described as follows: The head small and hornless; the face speckled or gray, and neither too long nor too short; the lips thin, and the space between the nose and the eyes narrow; the under jaw, or chop, fine and thin; the ears tolerably wide, and well covered with wool, and the forehead also, and the whole space between the ears well protected by it, as a defence against the fly; eyes full and bright; the legs neither too long nor too short.

The South-Down, both for mutton and for fleece, is fully equal to any other breed. They do not shear quite as heavy a fleece, nor market so heavy a carcass as some of the long-wools, but both are worth more per pound in the market. The buck can be profitably introduced into any flock, which will result in improvement. The South-Down is a beautiful, quiet animal, and so thoroughly domesticated as to follow readily after its owner, and it seems to be fond of the companionship of man.—*I. V. M., in Ohio Farmer.*

WHEN TO BUY SHEEP.

As a rule, the best time to buy is in the late summer—as flock-masters who have kept their sheep through the winter prefer to shear them before selling. It is usually most profitable to do so. After the first to middle of August, the lambs are ready for weaning, and the farmer knows pretty well what the increase of his flock is to be, and also what his crops of grain and grasses will allow him to winter properly. The season's yield at home also affords the buyer a better opportunity for gauging the number of stock to suit the probable contents of barn and granary. Ordinarily, where one seller of store sheep can be found in the spring, ten can be found in the late summer or fall.—*National Live Stock Journal*.

RAISING HOGS.

MR. EDITOR—much has been said in the agricultural journals of the South on the subject of planting all cotton and buying all supplies. It has been well observed that the most thrifty planters have been those who raised all of their supplies on the farm.

Where corn is worth one dollar per bushel there is no question but that Western pork can be bought cheaper than hogs can be raised on *corn alone*. Therefore, in discussing this subject all idea of raising hogs on corn in a cotton country or in any country where labor is high, must be discarded. Those crops must be raised which the hog can gather for himself. The force of this remark will be seen when we consider that the gathering and feeding out most crops constitute about half their value, and especially is this true of peas.

Twenty-five years ago the writer knew an old gentleman in Georgia, who adopted the high culture system—that is, planting a few acres—manuring and cultivating well. He was remarkably successful in raising hogs, and noted for having something of everything to sell, and especially lard. His plan was to have adjoining his hog pasture, lots planted especially for hogs. These consisted of oats, barley, ground-peas and potatoes. He sowed oats in the fall and let the hogs graze them, alternating from one lot to another.

As soon as potatoes were large enough the hogs were turned on a small patch, and this succeeded by ground-peas, and cornfield peas. His hogs were always fat and very heavy when killed, affording large quantities of lard, without consuming much corn.

Orchard grass and blue grass grow well in an apple orchard. When well set this might furnish a profitable pasture for hogs. To all these above described arrangements should be added clover and *lucerne* patches. The latter is known to be the best soiling crop ever raised in Georgia. Several years ago the writer ordered all the unthrifty pigs on his plantation brought to a town lot to be “slopped.” Eight or ten were brought in and the cook ordered to attend to them. As usual she allowed them to die one by one during the winter. About the first of March the two remaining mangy pigs were turned

out. They found their way into a small lucerne patch which was then beginning to grow luxuriantly. Observing that they were very fond of it, they were allowed to continue their visits. No two pigs ever improved faster.

DOG TAX.

The number of dogs in Richmond, Va., on which a tax has been paid, is 2,440, and the revenue accruing therefrom \$1,060, which will be considerably augmented by a fine of those who have failed to comply with the law.

The canine population of Richmond, Va., is numerous, and the revenue from taxation large, but we believe that it will be found equally numerous in many other parts of the country, and it would be of infinite advantage to the sheep interest of the whole country, if a proper dog tax were levied and collected, and the proceeds appropriated to paying for sheep destroyed. Experience has proved, however, that no candidate can be elected to legislatures, generally, who expresses sentiments favoring a dog tax. The value of the sheep annually destroyed by worthless dogs, in our country, would be sufficient to relieve all the suffering in regions devastated by grasshoppers and potato beetles; yet the owners, as a class, have done less, probably, for that charity than any other. Worthless men own the greater share of the worthless dogs, and do more to populate pauper houses than any other class.

THE DOG WARFARE.

Mr. Dodge, in the January Report of the Department of Agriculture has the following: The warfare of dogs upon sheep still continues; the direct losses are a million of dollars annually, in wool and mutton, and, indirectly, even a larger sum in the repression of sheep-husbandry, and the consequent waste of a large per centage of the annual crop of grass; a crop more valuable than that of cotton or corn, throughout the Southern States and elsewhere in all dog-cursed sections of the country. The canine warfare is a badge of vagabondage, an indication of savagery and lawlessness inconsistent with a progressive state of agriculture. In communities where "every very poor man keeps two," the average legislative candidate dares not pledge himself to vote for a dog-law. Until recently, only a few States in which wool-growing is prominent had dog-laws, which is equivalent to saying that the ideas on which our agriculture was based were primitive, and its rural processes crude.

A rich, well-pulverized, clean and rather stiff loam is best for onions. The seed should be sown in rows nine or ten inches apart (some sow one foot) and four to six inches apart in a row.

A HINT TO FARMERS

In some sections—and it would be a decided advantage in thoughtfulness and kindness in all sections—farmers give each of their boys, and girls, too, a strip of land to raise whatever they choose upon it, and dispose of the product for their own benefit. It is a favor that they all appreciate, and it is a pleasant and serviceable employment for them in their leisure hours. They will vie with each other in their skill at raising their little crops, and the proceeds applied to their own use are frequently of some value; and the whole arrangement, while it instructs them in the cultivation of the soil, early implants in the children the idea of thrift and economy. Sometimes, where a good many animals are raised, a pig, a lamb, a calf, up to even a colt, according to the age of the children, is given to each to rear and to keep or sell. Farmers, think of this; it will more than repay you in the happiness and confidence it will impart to your sons and daughters.—*Germantown Telegraph*.

WORK AS A REMEDY.

Dr. Dio Lewis says: A lady has just left our rooms whose case illustrates an important idea. Ten years ago she was an invalid. Her malady was obstinate, and at the end of a year's treatment a consultation resulted in the opinion that her case was cerebro-spinal irritation, from which she would probably never recover. Six years ago her husband died. His estate proved insolvent. The wife engaged in an active occupation to support her three children. In a year she was well, and has remained so ever since.

There are two million dyspeptics in America. Nine in ten of them could be cured by work.

A wealthy clergyman from a neighboring State assured us that he had spent eight years and thirty thousand dollars in seeking a cure for his dyspepsia. He had traveled everywhere and consulted all sorts of doctors. We are afraid he will never forgive us for telling him that six month's hard work would make a well man of him.

REMEDY FOR CABBAGE WORMS.

Hellebore, lime, salt and similar substances have been used with varied success for the destruction of cabbage worms. It is now stated that bran and buckwheat flour answer the purpose better than any other remedies that have been tried. The bran is simply dusted over the infested cabbages as soon as the worms make their appearance. If the worms are very thick, about a handful of bran is required to each cabbage head, and sometimes it is necessary to go over the plants the second time. A hundred weight of bran is sufficient for an acre. It must be applied when the worms are young. When they are full grown or very strong, it does not appear to affect them. The buckwheat flour is sifted upon them by

means of a sieve, in the evening or in the morning when the dew is on the plants. If one application does not destroy the worms a second one should be made. It is probable that wheat flour, fine Indian meal or any other pulverulent farinaceous substance would have the same effect.—*American Garden.*

BEES FOR FARMERS.

Is it not strange that farmers should so generally neglect to keep bees, or to gather even the sweets which they want as a luxury in their own families? They have the room, they have the pasture, they have all the conveniences for keeping a half dozen swarms and producing the best results. They will tell you that they have not time to study the wants of the honey-bee, and to manage them properly. But who has more time during the winter than the farmer? who has more time to study the habits of the bee during spring and summer, and to understand what is necessary to success, than the farmer?

The farmer spends his life mostly in fields, and the bee comes more under his immediate observation than of any other class; but he seems to shut his eyes to natural phenomena, and the result is that honey is mostly produced by persons in other occupations, such as mechanics, owning small lots, and in cramped situations, those who are not in a condition to give them convenient pasture, such as almost any farm can furnish. But the farmer, after all, furnishes the pasture for other people's bees, and then buys his own honey, or goes without it. He may thus be considered as most generous in the dispensation of his bounties, but it is wholly unintentional. This is one of the wastes on a great majority of all the farms that are not utilized by the farmer, who is always croaking that farming don't pay! Why, I think, he wastes almost as much as he uses, for want of studying his means. Perhaps we have now entered upon a new era under the auspices of the Grange. When the farmer becomes social, and talks over his affairs familiarly, he will begin to take note of these wastes, and to mend his ways.

I know a woman who makes a good living from 20 to 30 swarms of bees, and the care of them is only a pastime to her. It is a pleasure to her to watch the industry of her bees and to provide for all their wants. As she is so successful, I asked her how much of her time it really occupied, to which she replied that a half hour per day for six months would cover all the time spent. I am an artist, and have only a small lot, scarcely space to set six hives, but under those cramped circumstances can make 250 pounds of honey to sell, besides all we can use in the family. My honey is mostly obtained from the farmers' pastures, and I carry their products to market. But I only utilize what farmers voluntarily waste. Would it not be well for farmers to use their own bee pastures? I am constantly dreaming of a happy time coming, when I shall be able to own a

small farm, and have the pleasure of spending the remainder of my life in the open fields. The farmer is truly blest in being brought close to nature, where he may read her secrets.—*Live Stock Journal*.

STUDY TO SAVE STEPS.

If farmers would get in the habit of spending half an hour each day in thinking how steps may be saved, work would turn to much more account. Some barns are so unhandy that thousands of steps are taken every year that might be saved. In the house, and especially in the kitchen, is this the case. Many a farmer spent hours and hours last winter by the fire, kept in by the cold, when he would have been much better engaged in digging a well under the kitchen, so as to have a pump to bring water into the sink. Such an improvement will save miles of travel every year; and whenever water is drawn therefrom, blessings will be pronounced. Some pantries are so inconvenient, and so deficient in drawers and shelves, that time is lost in hunting for things, and temper is soured. Pray—stop, consider, devise, execute; and if it does not suit, try again—and do have things convenient, and save steps.—*N. Y. Tribune*.

MAKE THE FARM SELF-SUSTAINING.—In an address before a North Carolina Agricultural Society, Col. A. A. McKay, dwelt upon the necessity of making each farm self-sustaining; said that “all cotton” encourages extravagance, bringing cash, which is wasted, as it was last year, when the Southern farmers “gambled away in cotton futures one hundred millions of dollars.” Let every farmer, he continued, raise first what he needs to make his farm self-sustaining, and then let the cotton come in, and the cotton money will be clear gain.

CONTINUED SUPPLY OF GUANO.—More detailed accounts of a report made by the Ambassador from Peru at London, on the supply of guano in that country, have come to hand, and are calculated to relieve the fears so widely entertained of an early failure of the guano supply. On some forty-five different localities on the mainland and islands of the Peruvian dominions guano deposits are found, some of them amounting to millions of tons.

A NEW YORK horticulturist sells Baldwin apples at \$10 a barrel. He takes a slip of paper and cuts children's names; then places the paper around the apples when they begin to color, and in a week or two Mamie, Jamie, Johnnie or Susie appears on the apple in large red letters. These picked and barreled by themselves, bring fancy prices.

The total increase in the number of granges in the United States during the last three months is said to have been about 1,000.

THE PATRONS' OBJECT.

The following is the beautiful preamble to the Constitution of the Order of Patrons of Husbandry, adopted at the eighth annual session of the National Grange at Charleston, S. C., February, 1875:

"Human happiness is the acme of earthly ambition. Individual happiness depends upon general prosperity.

"The prosperity of a nation is in proportion to the value of its productions.

"The soil is the source from whence we derive all that constitutes wealth; without it we would have no agriculture, no manufactures, no commerce. Of all the material gifts of the Creator, the various productions of the vegetable world are of the first importance. The art of agriculture is the parent and precursor of all arts, and its products the foundation of all wealth.

"The production of the earth are all natural laws, invariable and indisputable; the amount produced will consequently be in proportion to the intelligence of the producer, and success will depend upon his knowledge of the action of these laws, and the proper application of their principles.

"Hence, knowledge is the foundation of happiness.

"The ultimate object of this organization is for mutual instruction and protection, to lighten labor by diffusing a knowledge of its aims and purposes, expand the mind by tracing the beautiful laws the Great Creator has established in the Universe, and to enlarge our views of Creative wisdom and power.

"To those who read aright, history proves that in all ages society is fragmentary, and successful results of general welfare can be secured only by general efforts. Unity of action cannot be acquired without discipline, and discipline cannot be enforced without significant organization, hence we have a ceremony of initiation which binds us in mutual fraternity as with a band of iron. But although its influence is so powerful, its application is as gentle as that of the silken thread that binds a wreath of flowers."

CATHOLICS CAN JOIN THE ORDER.

It is well known that the opposition which his holiness, the Pope has manifested toward the Order of Patrons of Husbandry has deterred many Catholic farmers from becoming members of the Grange. In accordance with the advice of one of the Catholic Bishops of Minnesota, a member of that Church who desired to become a Patron addressed the Pope on the subject, setting forth the objects and aims of the Order, and the means by which it proposed to attain them. The following is the substance of the reply thereto:

"The Pope allows the petitioner to join the Grange of Patrons of Husbandry, and be a member thereof, if he finds nothing therein conflicting with his conscience or the creed of the Catholic Church."

As a consequence, the Order has received a large accession of

strength in Minnesota, and when the news of the Pope's decision has reached other States, its effect will be to largely increase the numbers of the Patrons.—*Colman's Rural World*.

HAPPY HUSBANDS.

It is a man's own fault if he is unhappy with his wife, in nine cases out of ten. It is a very exceptional woman who will not be all she can to an attentive husband, and a more exceptional one who will not be very disagreeable if she finds herself wilfully neglected. It would be very easy to hate a man who, having bound a woman to him, makes no effort to render her happy; hard not to love one who was constant and tender, and when a woman loves she always tries to please. The great men of this world have often been wretched in their domestic relation, while mean and common men have been exceedingly happy. The reason is very plain. Absorbed in themselves, those who desired the world's applause were careless of the little world at home; while those who had none of this egotism strove to keep the hearts that were their own, and were happy in their tenderness. No woman will love a man the better for being renowned and prominent. Though he be the first among men, she will only be prouder, not fonder; and if she lose him through this renown, as is often the case, she will not even be proud. But give her love, appreciation, kindness, and there is no sacrifice she would not make for his content and comfort. The man who loves her well is her hero and her king. No less a hero to her through he is not one to any other; no less a king, though his only kingdom is her heart and home.

MADAME JEROME BONAPARTE.

Madame Bonaparte is still living in Baltimore, at the age of ninety years. She says she has no intention of dying until she is a hundred. She has been to Europe sixteen times, and contemplates another trip this summer. This old lady has more vivacity, and certainly more intelligence, than many of the leading women of fashion of the present day. She expresses her opinion upon all subjects with great freedom, and sometimes with bitterness. She has little or no confidence in men; and a very poor opinion of women; the young ladies of the present day, she says, all have the "*homo mania*." All sentiment she thinks a weakness. She professes that her ambition has always been—*not the throne, but near the throne*. Mr. Patterson, her father, died in 1836, at an advanced age, in possession of a large fortune. In his will, which is one of the most remarkable documents that has ever been deposited in the Orphans' Court of Baltimore, he says: "The conduct of my daughter Betsy has, through life, been so disobedient that in no instance has she ever consulted my opinion or feelings; indeed, she has caused me more anxiety than all my other children put together; her folly and

misconduct have occasioned me a train of experience that, first to last, has cost me much money"—in this, he means the marriage of his daughter to Jerome Bonaparte. The old gentleman left her, out of his great wealth, only three or four small houses and the wines in his cellar—worth in all about ten thousand dollars.

Madame Bonaparte is very rich; she has made her money by successful speculations and by her life-long habit of saving. For years she has lived at a boarding-house in Baltimore, seeing very little company. Her costume is ancient, and there is nothing about her appearance that suggests the marvelous beauty that led captive the heart of Jerome Bonaparte. Her eyes alone retain some of the brightness of former days.

For forty years Madame Bonaparte kept a diary, in which she recorded her views and observations of European and American society. Some of her remarks are severely sarcastic. A well-known Boston publishing house, it is said, offered ten thousand dollars for the manuscript volumes, but Madame refused to sell them at any price, and has committed them to the custody of her younger grandson, Charles Joseph, recently a law student of Harvard, now a rising member of the Baltimore bar. They will probably be published after the writer's death.—*Scribner*.

PRUNING THE RASPBERRY.

Canes which have once borne fruit, bear no more. Hence, these should be removed as soon as the fruiting season is over, cut off close to the ground, so that the young canes may have more room and air. At the same time due regard must be paid to the thinning out of the new canes, removing all that promise to be weakly or slender. Since we depend on the strength of the current year's growth of wood for our next year's crop, any process which will conserve the vigor and concentrate the energies of the young plant is deserving of regard. Summer pruning and pinching we deem a valuable means to this end. The young plant, when it has attained the height of three feet, should be pinched off at the tip; this will cause the side branches to develop, which in turn should be subject to similar treatment when from six to eight inches long. This pinching should be repeated if necessary, but should not be continued too late in the fall, since it would cause a late growth of tender wood which would suffer during winter. It might be practiced safely enough till about the beginning of September, and any subsequent growth not wanted might be removed by a light spring pruning. This method we regard as much less wasteful than that of allowing the summer's growth to proceed unchecked throughout the season, and then prune back in the spring to a proper height. By this latter method the plant is allowed to waste its strength in the unnecessary production of wood which must be removed, and the growth is long and slender; while in the former case all its energies are concentrated in the development of a stocky,

well-ripened cane, far better fitted to bear its destined weight, of fruit the ensuing season. This treatment is equally applicable to the black caps, unless where it is desirable to raise new plants: then the natural extension of the cane, or portions of it, must be allowed.—*W. Saunders.*

HOW TO MAKE GOOD APPLE DUMPLINGS.

First procure good, sour, juicy apples, pare and core, leaving them in halves. Get all your ingredients ready before beginning to mix your dough: sugar, soda, sour milk, lard, salt, flour and apples. Now make a dough, as for soda biscuits, only adding a little more lard to make it shorter. Take a bit of dough out on the kneading-board, and after kneading roll this as for pie crust. Then cut in pieces long enough to cover an apple, allowing for lapping the edges. Put in two of your apple halves, sweeten according to taste, and cover apple and sugar with dough. Lay the dumplings in your bread pan, the smooth side up, first having your pan well buttered. Proceed in this manner until you get your pan well filled. (be sure it is a large sized pan, for they will go off like hot cakes), then place a small bit of butter on the top of each dumpling, sprinkle a handful of sugar over all: then place in a moderate oven and allow them to bake an hour. Serve (not too hot) with pudding sauce, or with sugar and cream.

CHERRIES.

MARMALADE.—Stem and stone your cherries saving as much juice as possible; allow one pound of sugar to every pint of stoned fruit. Boil all for an hour uncovered, skimming and stirring well. When cool, put in pots and cover tight. It may not be generally known that boiling fruit a long time and without the sugar and without a cover is very economical, because the bulk of the scum rises from the fruit, not from the sugar; boiling without a cover allows the water to evaporate and so the fruit is firmer and better flavored.

CHERRY JAM.—To every pound of fruit, weighed before stoning, allow one-half pound of sugar; to every six pounds of fruit allow one pint of red currant juice, and to every pound of currant juice one pound of sugar. Mode—Stone the cherries first weighed, and boil them till the juice is absorbed, then add the sugar well crushed, then the currant juice and the extra pound of sugar to every pint of the latter. Boil altogether until it jellies, which will be in twenty or thirty minutes; skim well and stir constantly, and a few minutes before it is done, add some of the cherry kernels; these impart a delicious flavor to the jam. This is very fine.

TO PRESERVE MORELLO CHERRIES.—Select ripe cherries, pick off the stems and reject defective fruit. To every pound of cherries allow $1\frac{1}{2}$ pounds of sugar and one gill of water. Boil the sugar and water five minutes, put in the cherries, and boil ten minutes, remov-

ing the scum. Turn out into an earthen dish, and let it stand till the next day, when it must be boiled for another ten minutes. Cover with oiled or brandied papers and keep in a dry place.

TO PRESERVE MORELLO CHERRIES—ANOTHER WAY.—Stem and stone fine fruit, then weigh, allowing half a pound of sugar to a pound of fruit. Make a syrup, one pint of water to four pounds of sugar is a good rule; boil up; skim; then put in the cherries and scald from five to ten minutes. Can in glass.

COMMON PRESERVED CHERRIES.—To twelve pounds of good cherries, stoned, add six pounds of nice brown sugar; cook slowly for two hours. These are very good for common use, but will not keep so long as where one pound of sugar is allowed for one pound of fruit.

PICKLED CHERRIES.—One peck of cherries; one quart of best vinegar; four pounds of sugar. Heat the vinegar and sugar together, strain, then cook the fruit in it till done. Leave the cherries whole.

CURRANTS.

Canning green currants is done as any fruit canning is, but the following recipe is worth trying, though we can only say it comes well recommended, not having proved it ourselves. Gather when green, strip off the stems, put the currants into dry, clean bottles, and cork with resined corks tightly. Kept in a cool place in the cellar they will be fresh for a year or more, and are very nice in the winter for pies.

CURRANT MARMALADE, RED OR WHITE.—Pick over the fruit nicely, and allow an equal quantity of white sugar; put a layer of each alternately in a preserving kettle and boil ten minutes, or boil them the same length of time in a rich syrup boiled like candy.

CURRANT JAM.—To every pound of red currants allow three-fourths of a pound white sugar. Gather the fruit on a fine day, weigh it, then strip off the stalks: put the sugar and currants into a preserving-pan and boil three-fourths of an hour, skimming carefully. Put into pots and cover with brandied papers as you would jellies.

Currants are nicely preserved by taking equal weights of fruit and sugar, heating the sugar through with just enough water to prevent its burning, then washing the currants with your hand (unless wished whole) and boiling altogether three or four minutes.

SPICED CURRANTS.—Six pounds of currants, stemmed; three pounds of sugar, one pint of vinegar; two tablespoons of ground cinnamon; two of cloves; boil until thick, then seal in bottles or glass jars.

CURRANT JELLY.—Put your currants into a stone pot, and set into a pot of water over the fire. Heat gently till the juice is well extracted; strain, but do not squeeze, if you want the jelly clear. Measure the juice and allow a pound of sugar (some rules say three-

quarters of a pound) to every pint. Heat the sugar in a shallow pan, but do not scorch it. Heat the currant juice, put in the sugar hot, stir and skim well, and boil together four minutes. Very nice if carefully made. A jam may be made for the currants if they were not squeezed—making the jelly by adding raspberries and sugar, and boiling. Of course this jam would not be worth storing, but is excellent for daily use.

Jellies are finest made from fruit not *quite* ripe. Fruit should be picked on a dry day, and not allowed to stand over night without scalding, as it may not jelly.

RASPBERRY MARMALADE.—Three pounds of raspberries, three pounds of sugar, one pint of currant juice. Wash well together, and boil until they become as stiff as jelly, before adding the sugar. Be careful not to let it burn. Another way is to omit the currant juice, and boil after washing ten minutes, and then add the sugar, (pound for pound), stir well, skim it, boil for fifteen minutes longer, then cool and pack away.

RASPBERRY VINEGAR is made by adding three quarts of vinegar to six quarts of berries. Let it stand twenty-four hours, then squeeze the berries, add to the juice nine pounds of sugar, scald and bottle.

Editorial Department.

NOTES FOR THE MONTH.

Before describing the work for the month of July, it is allowable to speak of the origin of the name for the month, which was bestowed upon it by the Romans as indeed was the name of all the months of the year. This was called July in honor of Julius Cæsar. So far from his being a patron of Agriculture, he converted the "pruning hook" into the "sword," instead of the "sword" into the "pruning hook," and after conquering much of what is now England and France, he crossed the Rubicon, and planted his eagles on the capital of his own country. He afterwards conquered "all Spain." Though an ambitious warrior in place of a farmer, he was yet a believer in drainage, and though perhaps not like the venerable John Johnson thinking "the whole *arth* needed draining," he had yet formed the design of draining the "Pontine marshes," and probably, but for the useless and unfortunate assassination of this great man by Brutus and his associates, (for they did not restore the Republic), he might have carried his purpose into execution, for he knew no such word as fail in his vocabulary. Had he done so, much valuable land would have been reclaimed to agriculture, and the dreaded malaria of this region been driven way.

But "to return to our mutton."

WHEAT AND WINTER OATS

Will have been generally harvested by the time this reaches our patrons, the crop of each promises well, and in this region the spring oat will be quite a good crop. Let these crops be housed as soon as practicable. If to remain in the

field, it is the opinion of many that wheat in "dozens" will keep better than in "shocks," as in the former the drying off is quick after a rain, and therefore less apt to sprout than in shocks. Oats should be stacked, if not housed, for rain will damage the "tie" and effect their sale particularly. If the seed is good, and tolerably clean (which is rarely the case) a portion should be gotten out for market, and the other portion baled if the farmer has a baling machine, for they sell better baled, and are better protected from rats. Let us advise the farmer to get his wheat out, and sell it as soon as practicable, for the first price is generally the best, and much will be saved in the way of shrinkage, waste and stealage. We believe that the farmers have lost thousands upon thousands, by holding their wheat for a better price.

THE HAY CROP

Has been a short one. Let us economize in its use, lest we be short of feed next winter. As a substitute for hay it is not too late to sow

MILLET AND CORN FODDER.

The latter, however, must be sowed early this month on rich land in time to make a crop. Millet will mature in sixty days, a rich sandy loam is best adapted to this crop. It stands drought well, and on good soil will bring heavy crops. It may be sown in drills or broadcast. If in drills lay off the rows about 28 inches apart. If broadcast, sow four to five pecks per acre, and sow as early in the month as possible. From the fifteenth to the last of June would have been better.

LATE POTATOES

May be planted profitably as late as the 4th July. A very successful trucker informs us that he planted from 10th June to 4th July, and rarely fails to make a good crop. In our notes for June, we think now, we advised rather early planting. They must have the cool nights of the early fall to mature them well. The "Colorado beetle" is undoubtedly amongst us, probably introduced by the planting of western and northern potatoes. We hear reports of this destructive insect in different parts of the State. The remedy seems to be "Paris Green." The "*Agriculturist*" for June, gives the following directions for the best mode of its application:

"It is necessary that the very deadly character of this poison should be known in order to insure care in its use. No persons with scratched or cut hands should apply it, and whoever uses it should avoid handling it, avoid breathing the dust, and everywhere and all the time keep in mind the absolutely dangerous character of the article. It should be stored out of reach as carefully as gunpowder, and its application should not be entrusted to a careless or ignorant person. There are two methods of applying it: in the dry state, diluted with some powder, and in the liquid state, suspended in water. There are various qualities of Paris-green in the market; the best makers, to their shame be it said, make several brands; in other words, adulterate it in the factory. There is no ready test which one can apply to ascertain the purity of the article, and the only way is to buy of responsible parties who will properly represent its quality. For use in the dry state, flour is found to be the best to mix with the poison, as it adheres to the leaves better than plaster, which is sometimes used. With the pure poison one part to twenty of flour is sufficient. Some kind of a sifting arrangement must be provided, with a long handle. An apparatus which can be readily made by any tin worker was shown in the *Agriculturist* last month, p. 187; of course some other contrivance that will answer the purpose of may be substi-

tuted; even a wide mouthed bottle, with muslin tied over the mouth has been successfully used. Always keep to the windward, and by every possible precaution avoid breathing the dust. It takes but a little properly applied, and even distribution is of more consequence than a large quantity. In applying Paris-green in the wet way, remember that it is not soluble in water, but is only diffused through and suspended in it, hence it must not be allowed to settle to the bottom of the vessel. Frequent and thorough stirring must be attended to. A tablespoonful of the poison to an ordinary pailful of water is the quantity used. It may be applied by means of a watering-pot, or by the use of some of the various garden force pumps sold by seedsmen and at the implement stores. In using be careful not to wet the skin with the liquid, and if it gets upon the hands or elsewhere, have water near by to wash it off at once. When a force-pump is used, the liquid can be kept stirred by now and then directing the stream into the pail containing it. The chief use of Paris-green is to kill the Colorado potato-beetle and the cotton-worm; it has been successfully applied in the liquid way, to kill canker-worms on apple and other trees, and has been used also on squash and other vines in the garden. Of course it will not be proper to apply it to cabbages or other plants of which the foliage, or other parts which can retain the poison on the surface is eaten. We repeat that Paris-green is a most dangerous poison and must be used with a full knowledge of this fact. Store it where by no accident others can have access to it. Use it in such a manner that no harm can come to the operator. See that the pails and other vessels are used for nothing else. Finally, do not use it at all, if any other means for destroying insects will accomplish the end." If this beetle is not very numerous they should be killed at once by the hand, or placed on the ground and mashed with the foot.

CORN

Should ordinarily be so advanced as to lay by at harvest time, but the late, cool, dry spring, has prevented it this year; so the plough and cultivator must be kept running until laid by. It is a good plan to sow peas broadcast at the last working, to improve the land, or winter oats may well be sown at the last working, if it is near the last of July. The last working should be done with the cultivator not run deep, so as not to tear the roots, and to leave the land level, as best for the next crop, and to prevent washing if the land is rolling. If winter oats are to be seeded, we prefer to seed them the last of August, by putting one to one and a half bushel to the acre, covering them with a five tooth cultivator, and chopping in the row of the corn with a hoe. If the land is grassy much, it will be necessary to run the single plow in the rows twice, lapping the dirt in the centre, then sow, and cover with the cultivator. We adopted this plan the last of last August, and have a fine crop of oats. On the grassy part of the field, the plow was used, and on the other portion only the cultivator.

TURNIPS.

"Ruta bagas" should be sown the first part of the month if sown at all. We regard them as rather uncertain in our latitude. The turnip requires a light, rich soil. "Ruta bagas" should be sown in drills three feet apart, the land being previously well manured with well rotted stable manure, or a reliable superphosphate, or Flour of Bone. In England almost all the manure, and the superphosphates go on the turnip crop, which is eaten off by sheep, and then sowed to wheat and grass. The English in this way use much of the superphosphates and Flour of Bone. The "White Norfolk," or "Globe," and the "Red Top" may be sown last of July, though the last should be sown rather later than the

former, as it matures earlier, and does not keep so well, particularly if it ripens early. For "Salad" the sowing is not until the next month. The "Seven Top" makes the most hardy salad turnip, but the quality is not so good, and the market men are complaining of it as not being salable, and the "Norfolk" or "Globe" are preferred now for that purpose. They do not stand cold winters well, and require some protection. The "Yellow Aberdeen" is a popular turnip for table and stock. The turnip crop, however, except "Ruta бага" had best not be sown until August and first of September.

ASPARAGUS AND STRAWBERRIES.

Should both be worked now, if not previously done. The proper time to work them is as soon as the crop is over. The dirt should be thrown from the asparagus with a single plow—the hoe to follow, cutting out all grass, and levelling the beds, and in a few weeks throw the dirt back again. Strawberries which are always very grassy when the gathering ceases, should have the dirt thrown from them with a small board, such as is attached to the "Watt plow," to be followed with a small hoe removing all the grass and runners. Then the "five tooth cultivator" is to be run through them weekly, and the hoe used whenever the grass begins to grow between the plants in the row, the stools being kept distinct. This is a very expensive crop to work, and has not paid the producer at all the present season. As soon as the first working is done, manure may be well applied, so as to give nourishment to the plant, which has just gone through the exhaustive process of fruiting, and prepare it, and strengthen it for the production of fruit the next season. Use stable manure which has been made from feed clear of grass seeds, or a compost of hen manure, ashes, or kainit. plaster, a small quantity of salt, made up with rich earth as clear of grass seeds as can be procured. Substitute stable manure if hen manure cannot be had.

SWEET POTATOES.

If the ground is completely covered with vines, nothing more is to be done, except to pull up with the hand any weeds or grass which may be growing among the vines. "Crab grass" is said to be especially injurious to this crop. Young vines must be well worked, care being taken never to cover up the vines, and never suffer them to take root if possible, but at the hill where planted.

MELONS.

Keep the hills well up, and as light as possible, and clean of grass. Some sow "corn-field peas" at the last working among the vines, so as to afford something for the tendrils of the melon to lay hold of, and prevent their being blown about by the winds. The idea, we think, is a good one—nature evidently intended these tendrils (curls) to catch hold of something, to make the vine steady, and fixed.

CABBAGE PLANTS

Should be set out this month, 1st to 15th for winter use. If the ground is not rich they may be set out earlier, as on such land there is not the same danger as on rich of the plant maturing too soon, and failing to keep. But the ground for cabbage should be rich.

FALLOWING

May be done last of this month if the farmer has time. But

WHEAT AND OATS

should first be gotten out and prepared for market, and wheat sold as soon as possible.

So July too is a busy month. But if our programme above laid down, is fol-

lowed out and the wheat crop gotten out, and marketed, we think we can all take a holiday in August and a short trip to our glorious mountain regions, or some where in Virginia, which offers so many attractions to the health and pleasure seeker.

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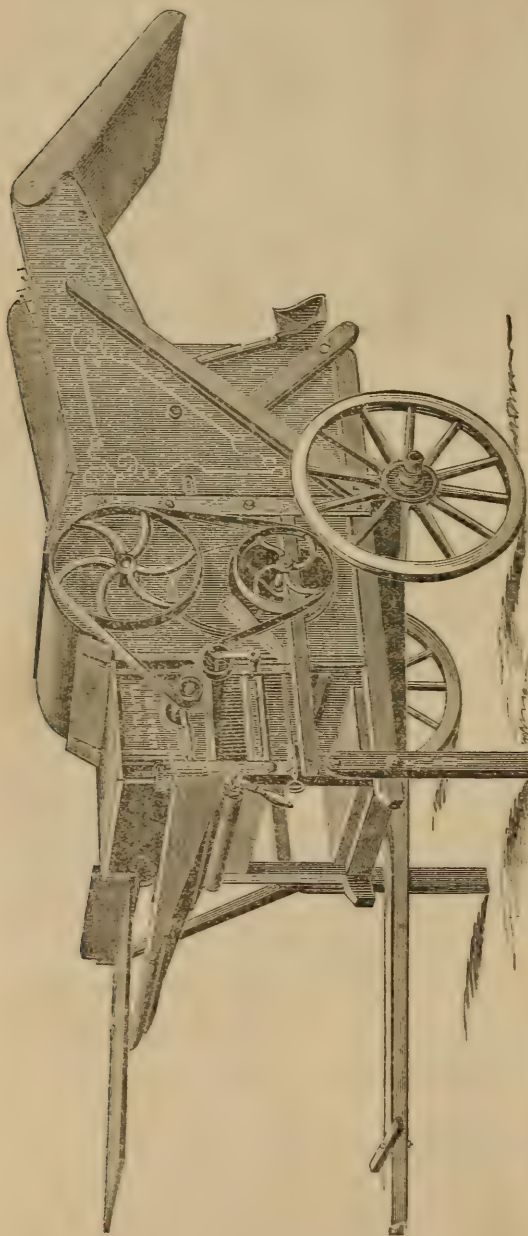
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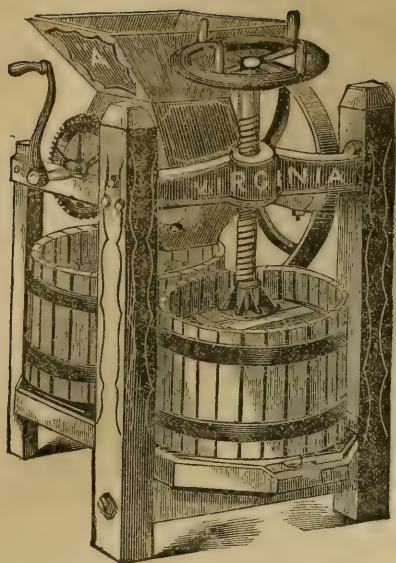
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All the above are from Herd-Book Stock, and can be entered in next volume of Herd Book.

HERD-BOOK ALDERNEY BULL SUB-BOOK (1262).

nine years old; bred by J. Howard McHenry; one of the finest bull in the State. Price \$100.

PREMIUM ALDERNEY BULL HANNIBAL

four years old. Sire Imp. Hannibal (618); Dam pure Alderney Cow, but not registered; took 1st Premium State Fair 1873. Price \$80.

DURHAM BULL STONEWALL.

bred by James Gowen of Pennsylvania, roan color, of fine size, and splendid form. Price \$100 worth twice the money.

TWO DURHAM CALVES (Heifer and Bull),

four months old, roan color. Price \$30 each.

COTSWOLD AND SHROPSHIRE LAMBS,

at from \$10 to \$15 each.

BERKSHIRE PIGS.

from best stock in the State. Price \$8 single pig, or \$15 per pair.

The above prices are one-fourth less than Northern prices for such stock. Address

A. P. ROWE,

Fredericksburg, Virginia.

jj-2t

MANHATTAN Life Insurance Company OF NEW YORK.

<i>Assets January 1st, 1875,</i>	-	-	<i>\$9,690,750</i>	<i>48</i>
<i>Undivided Surplus,</i>	-	-	<i>1,808,329</i>	<i>22</i>

All its policies are incontestable, and non-forfeitable from the second year.

Dividends Annually.

**\$5,500,000 Paid in Losses during Twenty-Four Years,
and no Claims Unpaid.**

Premiums may be paid Annually, Semi-Annually, or Quarterly, as best suits the convenience of the policy-holder.

P. T. MOORE,

J. ADAIR PLEASANTS,

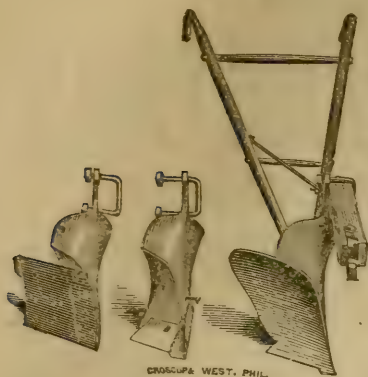
Agent City of Richmond.

General Agent.

OFFICE: 1200 MAIN STREET, UNDER PLANTERS NAT. BANK.

THE WATT PLOW

VICTORIOUS ON EVERY FIELD!



A combined TURNING PLOW, CULTIVATOR, SUBSOILER, ROW-OPENER, PEANUT-DIGGER, TOBACCO and COTTON SCRAPER and SWEEP.

No CHOKING when bright and smooth; no LABOR to the plowman; ONE-THIRD LESS DRAUGHT to the team; thorough BURIAL of Weeds, Grass, &c.; great STRENGTH, Durability and Economy in its use, and complete pulverization of the soil.

FARMERS WHO USE IT WILL USE NO OTHER.

Awarded all the Premiums at every Fair attended in 1873.

Awarded First Premiums at every Fair attended in 1874.

Virginia State Fair, Richmond—FIRST PREMIUMS ON THREE AND FOUR HORSE PLOWS.

Right and Left Hand—ALL PREMIUMS AWARDED THEIR SIZES.

Also at the Plowing Match ALL PREMIUMS AWARDED WHITE PLOWMEN were taken with WATT PLOWS of ONE, TWO, THREE and FOUR-HORSE SIZES; and COLORED PLOWMAN by ONE, TWO and THREE-HORSE SIZES; being

SEVEN PREMIUMS OUT OF EIGHT.

The superior work done by the WATT, and the complete ease with which it is handled, was apparent to all.

NORTH CAROLINA STATE FAIR, Raleigh, October 10th;

GEORGIA STATE FAIR, Atlanta, October 19th;

SOUTH CAROLINA STATE FAIR, Columbia, November 10th;

STAUNTON, VA., October 13th;

LYNCHBURG, October 20th;

WELDON, N. C., October 20th;

ORANGEBURG, S. C., November 3rd;

CHARLOTTE, N. C., November 3rd;

DANVILLE, VA., November 3rd;

POINT PLEASANT, W. VA., October.

Thus, with its great reputation before, it has gained new laurels this year, which must convince every farmer of its vast superiority over other plows.

We warrant every plow sold to be as represented or to be returned to us. We solicit a trial. Catalogues sent to any address.

WATT & CALL,

SOLE MANUFACTURERS,

1452 Franklin St., Richmond, Va.

Special Agents for "The Best" Spring-Tooth Horse-Rake and Gleaner; also for sale of our own manufacture. HARROWS, CULTIVATORS, and all kinds of IMPLEMENTS at lowest prices—all warranted.

BURDETT ORGAN.

I have a NEW BURDETT ORGAN which I will sell for \$150—Manufacturer's price \$175—Boxed and delivered at any Depot or Wharf in Baltimore. Terms of payment accommodating.

L. R. DICKINSON.

Also, THREE FIRST-CLASS SEWING MACHINES which will be sold at a discount of *forty per cent.* on Manufacturers' prices.

THE IMPROVED WHITNEY SEWING MACHINES, PATERSON, NEW JERSEY.

Sold Direct from the Factory at GREATLY REDUCED PRICES.



Paid. July 25, 1871.

ENDORSEMENT OF EXECUTIVE COMMITTEE
OF INDIANA.

After a thorough examination and test of the Improved Whitney Sewing Machine, we find it simple and durable in its construction, the material and workmanship first-class. The machine runs exceedingly light, and at a high rate of speed. It is capable and will do all varieties of family sewing in a

superior manner. We heartily recommend the Improved Whitney Sewing Machine to members of our Order requiring a modern and reliable sewing machine. By referring to our national executive circular we find that the Whitney Mfg. Co., through C. G. Akam, was the first standard sewing machine to make a national proposition to members of our Order, and we trust Patrons will give them the liberal support they justly deserve.—J. Q. A. Newsam, John F. Hall, Robt. Mitchell, Anson B. Line, R. C. McWilliams, Lindal Smith.

I hereby certify that the above is a true copy of the action of the committee
M. M. MOODY, *Sect'y Indiana State Grange.*

The Whitney Sewing Machine possesses all the requirements of a perfect Family Sewing Machine. It is a perfected Shuttle Lock-Stitch Machine. It is constructed upon sound and well tested mechanical principles. The workmanship is of the highest character. It is adapted to every variety of sewing for family wear from the lightest muslins to the heaviest cloths. It will Hem, Fell, Bind, Cord, Braid, Seam, Tuck, Ruffle, Hem-stitch, Gather and sew on at the same time and will work equally well on Linen, Silk, Woollen and Cotton goods.

Why the Whitney Mfg. Co., are Great Public Benefactors?

Because they are the Pioneers in breaking the combination prices in Sewing Machines, and putting this faithful servant within the reach of all. The Whitney is the best and now the cheapest First-Class Sewing Machine ever offered to the public. Send for circular giving all particulars,

The Whitney Manufacturing Company,
PATERSON, NEW JERSEY.

POWHATAN RAW BONE SUPER-PHOSPHATE,


MANUFACTURED BY THE

POWHATAN PHOSPHATE COMPANY,
RICHMOND, VA.

J. G. DOWNWARD, President. JOHN WHANN, Secretary and Treasurer.

To the Planters of Virginia and North Carolina :

We respectfully call the attention of those intending to use fertilizers on their spring crops to the Powhatan Raw Bone Super-phosphate, and particularly those who want a reliable fertilizer for tobacco and cotton, as we intend in the future, as in the past five years, to furnish an article which has no rival, regardless of price. Wherever it has been used by the side of any other fertilizer whatever, not excepting the deservedly popular and higher priced tobacco fertilizers of the day, it has in every case proved itself fully equal.

 Send for Circular.

mar—3m

SOLUBLE PACIFIC GUANO,

FOR TOBACCO, CORN AND OTHER CROPS.

After ten years' continuous use, throughout Virginia and the South, Soluble Pacific Guano has acquired a reputation for reliability equal to that formerly enjoyed by the Peruvian Guano, and the quantity used annually exceeds that of any other fertilizer.

It has been the aim of all connected with this Guano to produce the best possible fertilizer at the lowest possible cost, and we claim that the unusual resources and facilities of the manufacturers have enabled them to approach this more nearly than has been done in any other fertilizer with which we are acquainted. Those who have been using it unite with us in the opinion, that by its use the consumer gets

THE GREATEST BENEFIT FROM THE SMALLEST OUTLAY.

We offer it with great confidence for use on the Tobacco and other crops to be grown in 1875, with the assurance that it is, in all respects, equal to what it has been in the past.

PURE PERUVIAN GUANO,

AS IMPORTED.

We have a full supply of **No. 1 Guanape Peruvian Guano**, from the Government Agent in New York, selected from one of the finest cargoes ever imported. It is dry and in beautiful order and contains within a fraction of **13 per cent. of Ammonia**, which is within two per cent. of what the old Chincha Peruvian used, to contain—in fact, it would be difficult to tell one from the other.

We offer these standard and thoroughly tested fertilizers for Tobacco, Corn, and all Spring Crops, and are prepared to sell them at such prices as will make it to the interest of consumers and dealers to purchase their supplies of us instead of sending their orders to New York, or elsewhere.

For further information and supplies, address,

ALLISON & ADDISON,

mar—tf

Seed and Guano Merchants, Richmond, Va

BOTTOM TOUCHED.

Dry Goods at Lower Prices than Ever.

Money saved by buying your Dry Goods from Levy Brothers,

Who have made large purchases since the recent decline.

Fancy Grenadines at $8\frac{1}{2}$ ¢, 10 and $12\frac{1}{2}$ ¢ per yard, worth $16\frac{3}{4}$ ¢, 20 and 25¢; Rich Styles Fancy Grenadines at $16\frac{3}{4}$ ¢, 20, 25, 30 and 35¢, worth from 25 to 50¢;

Black Grenadines in all qualities from $12\frac{1}{2}$ ¢. up to \$2.25 per yard—this embraces not only the cheapest, but best assorted stock ever offered in this city;

Ecreu Linen Tussore Suiting at $8\frac{1}{2}$ ¢. per yard, worth $16\frac{3}{4}$ ¢; at $12\frac{1}{2}$ ¢. would be a bargain at 25¢; at $16\frac{3}{4}$ ¢. worth 30¢.—these goods must be seen to be appreciated; Silk-Warp Japanese Stripes and Plaids at 30¢. per yard, worth 50¢;

Japanese Cloth at $12\frac{1}{2}$ ¢., worth 25¢.; Wash Poplins, best goods manufactured, at $12\frac{1}{2}$ ¢. and 15¢., worth $16\frac{3}{4}$ ¢ and 25¢.; Debeges, at 25, 30, 35, 40 and 50¢. These goods can be had in all the new shades;

New style Plaid Dress, Goods from 25 to 50¢; per yard—a reduction of from twenty-five to fifty per cent. has been made in these goods; Fast Colored Lawns at $8\frac{1}{2}$ ¢, 10, $16\frac{3}{4}$ ¢, 20, 25, 30, $37\frac{1}{2}$ and 50¢;

Also, at the lowest prices, Pongees, Mohairs, Japanese Silks, Jaconets, Cambrics, Linen Lawns, and all other styles of fashionable dress goods: Black Alpaccas at 25, 30, 35, 40, 45, 50, 60, 75, 85, 90¢., \$1 and \$1.25;

Australian Crepe at 50, 60 and 75¢., worth 65¢., 75¢. and \$1; Yard-wide Printed Percales and Cambrics at $12\frac{1}{2}$ and $16\frac{3}{4}$ ¢. per yard—regular prices, $16\frac{3}{4}$ and 50¢.;

Victoria Lawns at $16\frac{3}{4}$ ¢, 20, 25 and 30¢.; also, Piques at $16\frac{3}{4}$ ¢, 20, 25, 30, 35 and 40¢.—all remarkably cheap; Swiss Muslins from $12\frac{1}{2}$ ¢. up to 50¢. per yard—all very cheap;

Checked and Striped Nainsook Muslins, Checked and Striped Swiss Muslins; Corded, Striped and Figured Piques—all at extraordinary bargains;

Lonsdale Cambric, first quality, one yard wide, at $16\frac{3}{4}$ ¢ per yard; Knight's Cambric, 33 inches wide, at 10¢., would be a bargain at $12\frac{1}{2}$ ¢.;

Utica Sheetting, 10-4 wide, in remnants from two and a half up to ten yards, at 40¢. per yard; 50¢. is the regular price everywhere; Remnants of Dress Goods of every description to be sold at less than half value;

Black and Colored Silks at lower prices and in greater variety than at any other establishment in this State; Embroidered Curtain-Muslin, one yard wide, at 25¢., worth $37\frac{1}{2}$ ¢.;

Hamburgh Net for Curtains, at 20, 25, 30, 35, 40, 50¢., and up to \$1 per yard;

Hamburgh Lace Curtains from \$4 to \$30 per set for two windows; Hamburgh Lace Lambrequins, from \$2.50 up to \$5 a pair—all very cheap and desirable;

Window-Shades in great variety, among which will be found an exact imitation of lace shades, now so fashionable. A large assortment of Curtain Fixtures, such as Cornices, Bands, Loops and Hooks;

Black, White and Ecreu Hamburgh Nets, at a reduction of 50¢: A full assortment of Laces suitable for trimming; A large assortment of Silk Neck Scarfs and Ties; Also, Black Lace Scarfs and White Lace and Muslin Scarfs;

Ready-Made Dresses for ladies in all of the latest styles, from \$3 to \$25; A full assortment of Under-Garments at extraordinary low prices; A large assortment of Ducks and Drillings for boys' and men's wear;

Sash Ribbons at 25¢., 30¢., 35¢., 40¢. and 50¢., and up to \$1.25 per yard—all extraordinarily cheap; A full assortment of Ribbons from a half-inch up to seven inches at the lowest prices; Gauze Shirts for men and women—some as low as 40¢. for men;

Bustles in all the new styles; also, Hoop Skirts and Balmorals; Matting, Oil-Cloths, Rugs, Carpets, Mats and Hassocks; Rubber, Jet and Gold Plated Jewelry in great variety; Summer Shawls, Lace Points and Jackets;

Black Grenadine Shawls at \$3, worth \$4; Laces and Embroideries in endless variety at low prices; Goodrich & Barnum's Tuckers at 75¢.; Machine Needles at 4 and 5¢.; Machine Oil in large bottles at 15¢.;

Clark's and Coat's Spool Cotton at 70¢. per dozen;

And thousands of other articles not enumerated in this advertisement.

Prompt attention to orders.

july—tf

LEVY BROTHERS, *Richmond, Va.*

The FARQUHAR SEPARATOR
 WARRINGTON
A. B. FARQUHAR
 York, Pa.

Lightest Draft, most durable, simplest, most economical, & cheapest in use.

Wastes no Grain. One Belt only.

Patented for the United States

ESTABLISHED 1816.

CHAS. SIMON & SONS,
 63 NORTH HOWARD ST., BALTIMORE, MD.
 Dealers in

FOREIGN & DOMESTIC DRY GOODS,

would call special attention to their splendid stock of Dress Goods, Linen Goods, Embroideries, Laces, and Hosiery; the best assortment of Mourning Goods in the city.

SAMPLES SENT FREE!

All orders amounting to \$30.00 or over, will be sent free of freight charges by Express, but parties whose orders are not accompanied by the money, and having their goods sent C. O. D., must pay for return of the money.

The COX PLOW
 OR
FARMERS FRIEND
W. L. COX,
 COR. 9TH & CARY,
 RICHMOND, VA.
 PAT. SEP. 25TH 1871.

The above celebrated PLOWS, with the VERREES Attachment, for adjusting the beam, furnished to farmers and dealers at low rates, and warranted to give satisfaction.

sep—1y

ELLERSLIE FARM.

Thoroughbred HORSES;

Half Bred HORSES;

Pure SHORT HORN CATTLE.

Improved BERKSHIRES

For sale,

Price, \$10 apiece.

Address,

R. J. HANCOCK,

Overton, Albermarle Co., Va.

Terms of advertising

of Planter and Farmer.

One square, 10 lines or less, one insertion.	\$2 00
1 square of ten lines for six months.	10 00
1 square of ten lines for one year.	15 00
1/4 page six months.	30 00
1/4 page one year.	55 00
1/2 page six months.	\$55 00
1/2 page one year.	100 00
1 page, single insertion.	20 00
1 page, six months.	100 00
1 page, one year.	180 00

FRESH

GARDEN and FIELD SEED

At the old stand of Palmer & Turpin, 1526 Main street, Richmond, Orchard Grass,

Timothy, Herds, Clover,

Kentucky Blue Grass.

Send for Catalogue.

feb—tf

W. H. TURPIN.

WYOMING SEPT-MONTHLY

LOTTERY

Authorized by the Legislature. Drawn on the 10th and 30th of each month. Tickets \$1; 6 for \$5. 1 chance in 3. \$200,000 in cash prizes. Capital Prize, \$50,000. Agents wanted. Particulars Address J. M. PATTEE, Laramie City, Wyoming

J. Y. BICKNELL,

Westmoreland, Oneida Co., N. Y.,

Won premiums on ALL VARIETIES shown at the New York State Fair last September, viz:

BRAHMAS, light and dark,
 COCHINS, Partridge and White,
 HAMBURG, Silver Spangled, Golden Spangled and Pencilled and black,
 DORKINGS, colored,
 HOUDANS, LA FLECHE, GOLDEN POLISH
 GAMES, Black-breasted Red and Duckwing,
 GAME BANTAMS, Black-breasted Red and Duckwing.
 GOLDEN SLABRIGHT and AFRICAN BANTAMS.

DUCKS, Rouen and Aylesbury,
 PIGEONS, all varieties.—All first premiums but four—FOWLS and DUCKS for sale from the same stock. Circulars free. apl tf

L I M E .

20,000 bushels best OYSTER SHELL LIME of my own manufacture, for sale low. I am also Agent for the Cumberland Tobacco Fertilizer, which has given great satisfaction in the Connecticut Valley, also Berry's Superphosphate made exclusively from Raw Bone.

GROUND PLASTER, AGRICULTURAL SALT, Building Lime, Hydraulic Cement, Calcined Plaster, &c., constantly on hand at wholesale and retail.

A. S. LEE,

Virginia St., Near Danville Depot.
 mar—6m

\$5 to \$20 Per Day at home. Terms free. Address G. STINSON & Co., Portland, Maine. feb—1y

ZELL'S

CELEBRATED

Tobacco Fertilizer.

Prepared expressly for this crop. The most popular Fertilizer in use. For sale by agents and dealers throughout the country.

ZELL'S AMMONIATED BONE SUPER-PHOSPHATE

Unrivalled for Cotton, Wheat, and all Grain and Root Crops. For sale by agents and dealers throughout the country.

ZELL'S DISSOLVED BONE SUPER-PHOSPHATE.

Supplied to manufacturers and dealers at low figures.

We are prepared to furnish the different Granges with an "Ammoniated Bone Super-Phosphate" of a standard quality, adapted to all crops, at very lowest price.

P. ZELL & SONS,

MANUFACTURERS.

ap—4m

30 South St., Baltimore, Md,

JOHN C. HACHTEL & CO.,

MANUFACTURERS OF

Hachtel's Ammoniated Superphosphate,
Hachtel's Pure Dissolved Bone,
Hachtel's Tobacco Fertilizer

BONE DUST. GENUINE LEOPOLD SHALL KAINIT (German Potash Salts),
MURIATE OF POTASH. BONE MEAL, and FERTILIZING
MATERIALS GENERALLY.

Liberal discount to dealers and others who buy largely for cash.

JOHN C. HACHTEL & CO.,

sep—8t

14 Bowly's Wharf, Baltimore.

FALL STYLES, 1874.

CHARLOTTESVILLE WOOLEN MILLS SAMPLE CARDS

Are now ready for mailing. Our assortment embraces

TWENTY-FOUR PATTERNS.

Merchants desiring samples, will please address,

**CHARLOTTESVILLE WOOLEN MILLS,
CHARLOTTESVILLE, VA.**

IMPORTANT TO FARMERS.

GREAT DOMESTIC INSTITUTION.

Recipe for making Artificial Guano.

No.	1. Clean Virgin Soil	20 bushels.
"	2. Wood ashes	3 "
"	3. Fine Bone Dust	3 "
"	4. Calcined Plaster.....	3 "
"	5. Nitrate of Soda	} 113 pounds.
"	6. Mur. Ammonia.....	
"	7. Sulph. "	
"	8. Sulph. Sodæ	
"	9. Sulph. Magnesia.....	
"	10. Common Salt	

Directions for Mixing.

Mix Nos. 1, 2 and 3 together; then, in a barrel two-thirds full of water, dissolve the chemicals, Nos. 5, 6, 7, 8, 9 and 10; when thoroughly dissolved add the liquid gradually to Nos. 1, 2, 3, and lastly add No. 4, (the Calcined Plaster) which will bring the whole to a powder. The soil used should be perfectly dry and mixed under cover.

The above recipe will make one ton, which will manure seven and a half acres of land. We will furnish the ingredients from No. 3 to 10 inclusive for twenty dollars, which, when mixed with Nos. 1 and 2 will make one ton.

This compound, containing, according to analysis, all the principal ingredients of the genuine Peruvian Guano, has been tested by a number of practical farmers (many thinking it equal to natural Guano), and for Grain, Vegetables, and particularly Tobacco, it has been found the cheapest and best fertilizer now in use.

All orders carefully and promptly executed.

BODEKER BROS.,

DRUGGISTS,

1444 Main Street, Richmond, Va.

CHESTNUT GROVE STOCK FARM AND POULTRY YARDS.

EASTON, PA.

Fine Bred and English Draft Horses, Thoroughbred Short Horn Cattle, Asiatic Poultry and Fancy Pigeons.

Draft Stallion took First Premium at Pennsylvania State Fair, and Warren County Fair, N. J.

The herd of Short Horns took three Herd Premiums, twenty-six first and seven second premiums in the fall of 1875.

Poultry took fifteen Society and nine Special Premiums in Fowls and Chicks, and seven on Pigeons at Lehigh Valley Poultry Exhibition, held at Allentown, January, 1875.

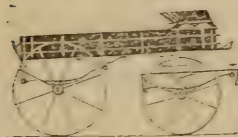
Colts, Cattle and Poultry for sale. Eggs from high-class light and dark Brahmas, Buff. Partridge and White Cochins at \$5 per setting of thirteen, securely packed.

Catalogues and Circulars upon application.

Having purchased of S. S. Cooper his entire herd of Short Horns, I am prepared to sell fine cows, heifers and calves at reasonable prices. Come and see them. No trouble to show the stock. Easton can be reached by N. P. Railroad from Philadelphia, or by N. J. C. Railroad from New York, several trains a day running each way.

THOS. S. McKEEN,
Easton, Pa.

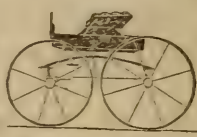
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W. C. SMITH,

MANUFACTURER OF

SPRING WAGONS, BUGGIES, &c



I have on hand and make to order on short notice Carriages, Buggies and Spring Wagons, with special reference to the wants of farmers. Light running and strong, of any desired capacity. Workmanship and material guaranteed. Prices lower than the same quality of work can be bought at in this or any other city. Orders solicited. Letters of inquiry promptly answered.

Repairing promptly and reasonably done.

W. C. SMITH,

my-6m

308 Fifth Street, Richmond, Va.

WAGONS! WAGONS!

The subscriber has on hand

WAGONS AND CARTS,

of various descriptions, that he wishes to dispose of on very moderate terms, and is still manufacturing others, and solicits a call from all in want of any article in his line, and he guarantees good workmanship, and first-rate material.

A. B. LIPSCOMB,

my

116 Cary Street, between Adams and Jefferson.

S. L. MERCHANT & CO.,

76 SOUTH ST.,

(Entrance on Maiden Lane,)

NEW YORK CITY.

IMPORTERS OF

ENGLISH, FRENCH AND GERMAN

PORTLAND CEMENT

OF THE FOLLOWING BRANDS:

Portl'd Cement { J. B. WHITE & BROTHERS.
KNIGHT, BEVAN & STURGE,
BURHAM CEMENT CO.,
BROOKS, SHOOBRIDGE & CO.,
PETERS BROTHERS.
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Portl'd Cement { FRANCIS & CO.,
HOLLIICK & CO.,
EASTWOOD & CO.,
REBINGTON,
TINGUEY,
LEVETT & CO.,
DYCKERHOFF.

Marble and Interior Decoration—VARIOUS KINDS.

KEENE'S (Superfine and Coarse.)

PARIAN CEMENT

do.

DYCKERHOFF'S (Black Cement.)

MARTIN'S

do.

ROMAN CEMENT (English & Scotch)

SELLARS' Gas Cement.

The attention of Architects, Engineers, Owners, Builders, Gas and Water Companies, is respectfully called to these importations.

Remit 6c. postage stamp for Treatise on Portland Cement.

july



ONE THOUSAND transplanted Arbor Vitæ 4 to 8 inches high, DELIVERED free to any part of the United States for only FIFTEEN DOLLARS.

500 ARBOR VITÆ (transplanted) 4 to 8 inches high, free to any part of the United States for only TEN DOLLARS.

15 ARBOR VITÆ and 10 WEEPING SPRUCE, nice 10-inch plants, delivered free to any part of the United States for only ONE DOLLAR. EVERGREENS—how, when, and where to plant—mailed free for stamp.

Remit money by draft, registered letter, or money order on Portland

Address,

WM. MORTON & SON,

ap—tf

Allen's Corner, "Cumberland Co.," Maine

Steam Engines and other Machinery For Sale.



In addition to a full line of New Engines, Saw Mills, and other Machinery of our own improved build, which we keep constantly on hand or build to order, we have now For Sale the following Second-Hand Machinery, all in perfect order, which we will sell at very low figures, viz:

Double-Hoisting Engines, 30-horse power, with drums and other hoisting gear, complete.

4-horse Stationary Engines, good as new;

Flue-Boiler 26 feet long, 42 inches diameter, with 2 flues, 14 inches diameter, iron front and other fittings complete;

15-horse power Stationary Engine; Tubular Boilers, 50-horse power each; 30-horse power Stationary Engines; 8-horse Portable Engine, as good as new; of our own make; 16-horse Stationary Engine with new vertical boiler; Several steam Pumps and Fan Blowers of various sizes; Engines for threshing, grinding and ginning, mounted on wheels or not, as may be preferred by the purchaser; Repair Work solicited.

WM. E. TANNER & CO.,

mar—5t

Metropolitan Works, Richmond, Va

*

ESTABLISHED 1839.

TO FARMERS, PLANTERS and GARDENERS

PURE **Ground Bone,**

MANUFACTURED AND FOR SALE BY

JOHN BULLOCK & SON,

Factory: Washington Road, Baltimore, Md.

Store: No. 61 S. Gay Street, Baltimore, Md.

P. O. Box 636.

For more than thirty years we have been engaged in the manufacture of "Pure Ground Bone", our crude stock being gathered daily from the butchers here, with whom we have yearly contracts. We have completed our new factory, and with the addition of the latest and most approved machinery, will be able to fill all orders sent to us at short notice and guarantee at all times to the purchaser a first-class article at the lowest market price.

Respectfully

JOHN BULLOCK & SON.

Subscription REDUCED to \$1.50 Per Annum in Advance.

TO CLUBS OF FIVE OR MORE, ONE DOLLAR EACH.

ESTABLISHED IN 1840.

THE SOUTHERN PLANTER AND FARMER,

DEVOTED TO

Agriculture, Horticulture, and Rural Affairs.

L. R. DICKINSON..... Editor and Proprietor.

RICHMOND, VA.,

AUGUST, 1875.

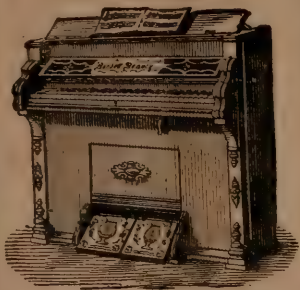
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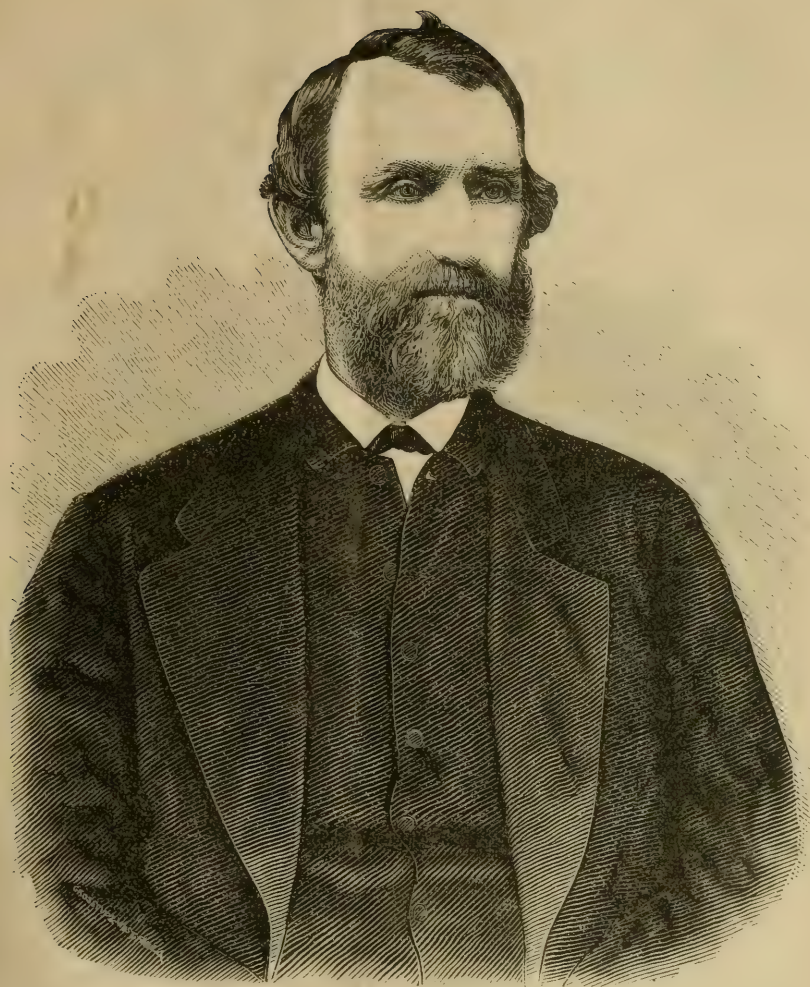
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L. R. DICKINSON, EDITOR AND PROPRIETOR.

New Series. RICHMOND, VA., AUGUST, 1875. No. 8

[For the Southern Planter and Farmer.]

COST OF FENCING.

[The following article is on an important subject to our farmers, and we hope to hear from others on the subject. We think we can safely say that our excellent correspondent, ex-Governor Wm. Smith, of Fauquier, will give us his views in our next issue.—Ed.]

When I look around me in this enlightened nineteenth century, with my political economy study cap on, and see the stupendous follies of people, for want of what they always claim to have to a high degree, a little common sense, and the want of sensible concurrent action to achieve important results, I have no hope of a millennium in agriculture or anything else, and believe the "*dies iræ*" will come and find the fool-killer's work not half accomplished.

In this day of degenerate politicians, however, who never attempt to enlighten the people, but follow in the wake of crude public opinion, as sharks in the wake of a vessel, who listen for the "*vox populi*" with ears as erect as a wild Indian who catches the sound of his game upon the passing breeze, who are all for personal success, and nothing for principle or the common weal—there is no hope for us but to await a change in the tide, and hope almost against hope, that a better day will dawn. Some year or so ago there appeared in an agricultural paper the broad assertion that the cost of fencing in the State of Pennsylvania was equal to the whole value of the live stock in the State. This was so remarkable a statement as at once to attract our attention.

To make some approximate estimate of the cost of fencing to the people of Virginia is the object of the present article, and whilst the data are insufficient or not sufficiently accurate, perhaps, to arrive at a high degree of approximation, low estimates have been advisedly taken, that the actual costs shall rather exceed than fall short of the results obtained.

From the statistics of Agriculture in 1870, we find that in the State of Virginia as at present organized, there were 73,849 farms of all sizes, and that of improved lands, exclusive of wood lands, and other unimproved lands there were 8,165,040 acres. This gives 110 acres as the average size of the farm of improved lands necessitating a fence. If we add ten acres additional to cover the wood and other lands under fence, we may safely assume we think that the average farm in our State requiring to be enclosed is about 120 acres, or 1200 square four-pole chains. If we suppose this farm to be in the form of a square, which of quadrilaterals, gives the minimum fencing for the area enclosed, the side of the square would be 34.64 chains, or as a very close approximation 762 yards. If divided into six rectangular fields, the amount of fencing required would be seven times as much, or 5,334 yards.

Allowing 40 rails for every hundred yards of an ordinarily good fence, we have to enclose properly the average farm, 21,336 rails. The rails are worth per hundred in both the timber and mauling about \$1 10 say, upon an average through the State, though as we have no means of verifying this hypothesis, it may be not be a very near approximation, yet the true value would probably exceed the amount assumed as our basis, as 100 good rails would make a cord or more of wood, and the cost of mauling is from 50 to 75 cents per hundred in different sections.

This gives say, 235 dollars as the cost of the rails necessary to enclose the average square farm. But this being the most economical form of enclosure for four-sided areas, and not adhered to in practice, we may safely assume in consideration of the crooked fences and irregular forms of our fields 250 dollars as a still closer approximation. Now comes in the additional expense of hauling and fencing. We suppose at the average distance for hauling rails at different seasons of the year, nine loads per day with a two-horse team, and 33 rails at a load would be a sufficiently high estimate. This would make 300 rails per day. If we assume the cost of hauling and the additional expenses of fencing the 300 rails to be two dollars, a low estimate, the cost of fencing the 21,336 rails would be 142 dollars, and allowing the small amount of eight dollars for the irregularity of fields as above 150 dollars.

Thus we have 400 dollars as an approximate result for the outlay necessary to fence in 120 acres of land with a good new enclosure into six fields.

It would therefore require an outlay to enclose the 73,849 farms in the manner and upon the basis adopted, \$29,539,600, or twenty-nine and a half millions of dollars. The value of all the live stock in the State by the same census was \$28,187,669, over twenty-eight millions.

Even if a four-field enclosure be adopted, the expense would be six-sevenths as much, or it would do away with only one division line, and the cost would be over twenty-five millions. We may safely as-

sume, then, that the cost of good new enclosures for all the farms of the State equal the value of their live stock. Granting that these enclosures require to be replaced every twelve years, we have here a little item of nearly two and a half millions of annual expenditures sunk in fences to keep out stock, two millions of which could be saved by requiring all farm stock to be fenced in, in standing pastures, or by moveable fences that could be durably constructed.

It should be observed also that the smaller the farm the greater the relative expense, as it requires just half as many rails to enclose 25 acres as prescribed, as it does to enclose 100 acres. The poor man and small farmer is thus much more interested in this matter than he has ever been taught to consider, but as we said before, our public men and law-makers never attempt to teach the people up to economic laws, but rather mount the rostrum to teach them how to vote.

We omit here the losses incident to our agriculture from successive droughts, which by some are supposed to be due in part to the destruction of our forests. This is, however, controverted. Though we have paid no special attention to this subject, either as to its philosophy or statistics, if there are any reliable—which we doubt. Yet one fact is worthy of consideration, and that is, that waters which fall to the earth are rapidly collected into streams and move off to the ocean presenting very little surface for evaporation, whilst the immense amount of water caught and held for evaporation by the great forests of a continent, can be better appreciated by the little urchin, who inveigles his playmate under a tree to shake down a heavy shower upon him, than the philosopher who has forgotten his boyish tricks.

But we leave this to the philosophy that rides upon the wings of the wind, and shoulders all responsibilities upon the gulf stream. What say the editorial fraternity of your city, yourself included. We believe they all speak *ex cathedra* on kindred subjects, and English Grammar.

C. J. KEMPER.

[For the Southern Planter and Farmer.]

A LETTER FROM MISSOURI.

Allow me to greet you from across the "Father of Waters," and pay my compliments to your most excellent Journal.

I have just finished reading the May number, one of the best yet, several articles in it being worth to the practical farmer each a year's subscription.

I cannot help drawing a comparison between the *Planter and Farmer* of to-day and that of *ante bellum* times. Then it was filled with learned dissertations on the art of Agriculture, which but few could understand and none practiced; now it commends itself for the entire practicability of all its communications. Its writers are evidently men who practice what they so ably set forth. I have

been induced to write a short article from reading the one on "Irish Potatoes" in May number.

I have raised a crop of Early Rose this season with half the labor I ever did before, and with better results. I will give the mode as taken from my dairy. Would like for others to try it. Ground being well prepared plant as early as possible in furrow, laid off, with a long sharp shovel, a little over three feet apart; cover with same, running close on each side of row. This leaves the ground in a succession of sharp ridges. When the first potatoes make their appearance above ground go over with a sharp harrow, if possible the Thomas smoothing harrow; this completely kills the young weeds and the potatoes now come up rapidly. When well up plow closely with a long bull-tongue, three furrows to the row. In a short time young potatoes will begin to form; then lay by with the shovel. Very little hoe-work will be needed, as this is sufficient hilling for early potatoes. And now a word about the labor question! I have worked with slaves upon a farm, with freedmen, and with native white labor. All as a general rule worked well when the *employer himself* set a good example, but for other reasons in addition to those "Powhatan" has given, I prefer the blacks. They are skillful in the cultivation of Southern crops and the use of tools, which foreign labor is not. Think for instance of attempting to raise and market a crop of tobacco with a set of raw foreigners. Plenty of native white labor can be procured here in the West, but those who have never tried it do not know the annoyance attending it. If I were a man of family, sooner than subject my wife to the annoyance and my children to the contaminating influences of hired boys, I would work fewer acres, or else adopt a different system of farming. Of course there are some noble exceptions.

Would say to Virginians, do not be in a hurry to move West. What with the grasshoppers, chinchbugs and drought, there are hundreds now all over this country who wish they had remained satisfied at home. I believe honestly, that all things considered, Virginia has no equal among the States for the farmer. What she lacks in fertility of soil is made up in natural advantages, and her soil, a great deal of it is as good, or can be made as good, as any in the West. The same economy practiced there will, in the end, reap as good results as here. I suppose this would be considered disloyal to my adopted State, but it is nevertheless true. Last year we had a drought of unexampled severity. This year we are drowned out, corn terribly washed on steep lands, a result of the miserable checking system on hillsides. And now the army worm is upon us. God save us.

HARVESTER.

It is easier to bear up under our misfortunes than to survive the comments of our friends on them.

[For the Southern Planter and Farmer.]

THE FAIRS OF THE STATE AGRICULTURAL SOCIETY

I have read with interest the article of "F. W. C.," in the *Planter* of the current month under the title, "The last State Fair and the next," and I like it. The writer is evidently an intelligent and appreciative farmer, and his timely suggestions are worthy of attention. His inquiries as to what has been done in the past may be answered, and what may be done in the future will, I trust, remove all causes for criticism. His question, why are larger premiums offered for Short-horns than other thorough-bred cattle, may be answered by the fact that high-bred animals of this class are more costly than those of other classes, and a higher premium is necessary to cover the risk of transportation and induce breeders to take that risk. F. W. C., if I mistake not the person whom the initials indicate, is a spirited breeder of Devons, which are much better adapted to the large district of Virginia east of the Valley to and including Tidewater, than Short-horns, and are, therefore, really of more value for that region, just as the South-down sheep is more valuable in a large portion of our State than the Cotswold; but a Devon bull will not bring one half the price of a premium Short-horn bull, whilst the premium offered for the former has not the same relative proportion. The breeders of Short-horns have complained of this as being too slight a discrimination in their favor, but the Society has done the best it could, and the present practice in this matter has prevailed since the first inauguration of our Fairs. I may add, that in making up the premium lists the work is usually referred to sub-committees of the Executive Committee, or rather the *Advisory Board* of the different departments, and the six members constituting the Board for the animal department are all gentlemen of high character and intelligence, who represent different sections of the State, and are familiar with stock-breeding, in theory if not in practice, and but one of them, so far as I know, has any personal interest in the breeding of Short-horns, and the premium list as published is the unanimous result of their action after due revision by the whole committee. It cannot, therefore, be fairly said that the Society is "run in the interest of Short-horns to the exclusion of all other breeds;" but the other breeds, with their grades, have, as we suppose, due consideration, and it certainly is not the intention to make any unjust discriminations.

Hoping that this may be a satisfactory response to the question of our friend F. W. C., I now pass to another part of his article which every true friend will endorse. It is too true, as he states, that our past exhibitions since the war have not been full in respect to farm, garden, orchard, and domestic products, but the reason for this may be seen in the bad seasons which have prevailed; and yet he very justly rebukes the farmers and their wives in the body of the State when they fail to exhibit samples of their products, and

permit the bulk of the premiums to be taken by those who resid near the city of Richmond. He very pertinently remarks, "that there is no department of the Fair which could be so well supplied and with so litile cost or trouble to the exhibitor." Having been blessed this year with fine seasons and crops, this reason will not be good at the approaching Fair, and it is hoped that the suggestions of F. W. C will be duly heeded, and that the display of these products will be grand and *telling* from all sections of the State.

F. W. C. next mentions "an annoyance which should be dispensed with—the introduction of fat-women, big babies, deformed animals," &c. Our reply to this is, that the rules forbid all demoralizing exhibitions, games of chance, betting on speed trials, &c., and only those shows which are innocent in their character are admitted, and they are taxed to an extent which yields a good income, which, added to other receipts, make up the fund from which the premiums are paid. And there is another view to take of this matter. Fairs will not succeed *without visitors*, and whilst many persons attend them with a view to instruction and profit, yet, probably a larger number go to be *amused* and *entertained*. Everything, therefore, which can legitimately contribute to both *instruction* and *amusement* will add to the general success. This principle is too well established by experience obtained from all popular gatherings to justify efforts to counteract it; and there are no good grounds for the belief that the Society at its Fairs, or the people who ought to be benefited by them, are in any way damaged by it.

On the whole, F. W. C. has done the Society good service, and I hope that the public will not only hear from him again, but that he will be on hand at the next Fair with a good herd of Devons, and other things which may be contributed from his well regulated farm.

W. C. KNIGHT, *Pres't S. A. S.*

[For the Southern Planter and Farmer.]

WHY CANNOT WE SAVE OUR OWN SEED?

It is estimated that from twenty to fifty thousand dollars are expended in Richmond yearly for garden seed. There would be some excuse for this if we could not grow these seeds ourselves. So far as my knowledge extends, the Early York Cabbage and the Cauliflower, are the only vegetables not bearing reliable seed in this latitude and climate.

For many of our seeds we have learned not to rely on the North, for example, of melons, cymplings, sweet potatoes, black-eyed peas, navy beans, peach blow potatoes and late corn. But for nearly everything else we send North, because it saves us time if not money.

There is a point in regard to the saving of seeds that must be borne in mind. We must know what class of plants will mix through the bloom. For example: You must not set for seed plants a ruta

baga turnip near a flat dutch, or other variety. The best of seed vegetables is not very extensive, but it is sufficiently so to make a knowledge of them necessary in order to have your seed unmixed. Some correspondent skilled in Botany will, I hope, give us some information on this point.

I suggest that neighbors form an association for mutual aid in this matter—one agreeing to have seed of the ruta бага only for instance, and another of the red top only, and mutually exchanging; and the same of other seeds that mix when planted in too close proximity.

There are certain insects that destroy seed. Snap beans and black-eyed peas are destroyed by a bug that bores out of them. The egg is laid while they are green and soft; is hatched in due time. The worm eats enough of the bean or pea to affect its power of generation. To prevent this the usual plan is to plant late—save seed from this late planting. The seed of the early crop may be preserved by filling any air tight vessel entirely full of the beans as soon as they are fully dry. Keep the vessel tightly corked until seeding time. The corked vessel contains so little air that the insect when hatched cannot live.

With regard to the early rose potato, thousands of bushels of which are sold here for seed, it has been answered in the *Planter*, that seed may be grown from the tuber of the same year planted in July. I myself have tested that the present season. Am now eating potatoes grown from seed planted from last year's crop which ripened in July, was planted and dry in October.

G. G. MINOR.

Henrico, June 16, 1875.

[For the *Southern Planter and Farmer*.]

BLUE GRASS, &c.

SMYTH COUNTY, VIRGINIA, FARMERS' CLUB.

The regular June meeting of Smith county Farmers' Club took place at the residence of Mr. C. W. Beatie, on the 24th, and was an interesting occasion to those in attendance.

The President being absent, Vice President James M. Byars, occupied the chair.

After the usual call to order, and ordinary preliminary business disposed of, Mr. A. T. St John from committee for examination of farm last visited, read his report. The farm was that of Capt. Jas. M. Byars, and for grazing takes rank as one of the best in this section. He has upon it a small herd of superior thoroughbred short-horns, among which may be mentioned the following: The young bull "Royal Briton," Jr., the last male calf of "Royal Briton," Sr., "Elvina 3d," dam of the younger "Royal Briton," also, "Ringlet" and "Milk Maid." The last named animal commenced giving milk in good quantity and quality at the age of nine months, and continued on so up to the time she had her first calf at eighteen months

of age; she was then milked freely for two years longer, near the time for dropping her second calf.

These animals are from the herd of Mr. Coffin, at Muirkirk, Maryland, who owned "Roy Briton" when he died.

After reading the report, Mr. St. John called particular attention to a large boundary of old pasture land where the blue-grass sod appears to be giving way, and its place occupied by common cinquefoil (*potentilla reptans*) and suggested an inquiry naturally arising as to what should be done with it? To plow the field would destroy much valuable blue-grass sod, and to fence off that portion, lying as it does in the very centre of the field, would be expensive. The question he thought one worthy of investigation, and might bring to notice some fertilizer by which the growing plant might be destroyed, at the same time improve the soil.

Mr. John L. Sanders believed it would be best to plow up the whole field, and thereby put the land in a better state of cultivation. The old sod was wearing out and needed resetting. Here a considerable length of time might elapse before a profitable sod of blue grass could be made to grow upon the land, but other grasses, known unto us as *cultivated grasses* as contradistinctive to *blue grass*, which grows spontaneously, could take its place in a much shorter space of time. He was one of those who believed that we had several other kinds of grass better adapted to our wants, which, after a few years of thorough cultivation of this land would take readily from sowing the seed and yield a larger profit, both for grazing purposes and for hay. The idea once so common that we should never plow an old sod had exploded. If we desire to add substantial improvement to our lands they must be judiciously cultivated, and then reset in grass. To plow up this entire field would not be loss but rather gain. Many places were now almost useless, and the whole field must soon become so, unless a change is brought about in some way. Let the land be put into cultivation, observing a proper rotation of crops, and seed in clover, timothy or orchard grass, or what is better perhaps, a mixture of several of these grasses. Upon the same area in a short time there would be more grass of a kind preferred by the animals, and hence a larger amount of fat will be the result. We know, even on rich land, several years are necessary to secure a good blue grass sod, while upon poor land it can scarcely be grown at all.

The chair (Mr. Byars) believed the question raised in the outset necessarily involved a discussion as to the relative merits of different grasses, and he was gratified to find so much interest manifested in the matter. He had been taught in early life to believe that blue-grass food at the head of the list for grazing purposes; the older it was the better; and was now unwilling to give up that it was not deservedly so. He desired to ask the question, which produced most fat? Called attention to a piece of old sod within the bounds of his own farm, upon which he usually kept his best cattle, and which afforded the ample supply of superior grass for a larger number, and

for a longer time than the same area upon any other portion of the farm.

Mr. Sanders, resuming his remarks, said in answer to the question, that he knew it was not generally conceded, but he was of the opinion that he could put on more fat with cultivated grasses than with blue grass, as we have it here. With the former the animal was more bountifully supplied and partook of it more freely and consequently improved more rapidly. That cattle have a preference for the former, is shown when the stock are in the same field. They eat the blue grass last.

The pasture referred to by the chair is no doubt one of the finest in the country, and so long as it remains in that condition ought not to be ploughed. While it is a good sod, the character of the land is almost incomparable—certainly the best on the farm. If this sod fails, plow it up and put no other grass, or sow blue grass, which has not been the custom heretofore in this section, and a large profit must result. If we class our lands first, second and third quality, we give to blue grass the first because of its spontaneous growth, leaving the second and third classes for what we have to-day, called “cultivated grasses.”

Mr. R. B. Snapp remarked that when blue grass has a good stand, and the season is favorable, it will no doubt graze more cattle than other grasses mentioned by Mr. Sanders, but will not produce as many tons of hay. These, if allowed to get full grown, will afford excellent grazing, but the blue grass, being more permanent, will last longer, though it does not stand drouth well. I find, too, that old pastures will run out; worms get into them; the ground, from being constantly trampled, becomes packed; the grass roots matted together, so that none but continued rains can wet the earth. When this obtains, it is all important to plow the land and impart new life to the soil. On my own plantation, a field of some fifty acres became almost impenetrable to water. Worms cut off the grass, and this season I have had it thoroughly plowed preparatory to resetting.

On being asked by the Chair if he could not restore it without plowing, said he thought not—that this was the best thing that suggested itself.

Mr. J. Look, of Rich Valley, in this county, who was present as a visitor, being called upon for an opinion, said: Blue grass on sandy soil seems not equal to those mentioned by the gentlemen as cultivated grasses. In his section of the county there were many old blue grass pastures, on high ground, with clayey soil, where the grazing was fine and the supply constant; but such was not the case in his own immediate neighborhood on the river, where sand was largely mixed with the soil. It was difficult to get a good set, and it was then liable to perish from drouth.

Mr. Goolsby concurred in the opinion of Mr. Look, and stated

further that old blue grass sod afforded a better supply of grass in winter, and in this, at least, was superior to any other.

Mr. Beatie believed the time usually for setting a blue-grass sod much too long. Eight or ten years are thought by many to be necessary. He has seen it done in a much shorter time.

Essayist appointed at last meeting not present: and after appointing a committee for examination of this farm, to make report at next meeting, the Chair appointed the residence of Capt. D. D. Hull for the next visit. Adjourned.

"ECONOMY."

"He said unto his disciples, gather up the fragments that remain, that nothing be lost."—*John. 6th ch. 12th v.*

In the application of the term economy, I wish not to be understood as meaning that contracted and parsimonious principle usually called stinginess, that closes up the heart and stifles every generous and noble impulse, but that more enlarged and comprehensive principle that prompts the farmer to husband all the resources of the farm and apply them to the best advantage.

Whatever may be said about the conservative influences exerted upon the personal character of the whites by the institution of slavery, and that it did have that effect I freely admit, yet it cannot be denied that it did, at the same time, have the farther effect of engendering habits of indolence and extravagance. This fact is abundantly proven by the sad condition in which almost every portion of the South was found at the close of the late civil war. The Southern people, always moderate and conservative and distrustful of innovations of every kind, have been slow to adopt those changes of habits which their altered circumstances have made indispensable, Many of them are still running in the same old ruts, and it is the most difficult thing in the world to get them out of them.

The cardinal virtue of economy is one of universal application, and capable of great expansion. There is scarcely an operation on the farm, or an item of domestic or household management, in which it cannot be applied, and the diligent, practical farmer will find occasion every day for its profitable exercise. Our Saviour, when on earth, took occasion to set us a notable example in the application of this great principle, when "he commanded his disciples to gather up the fragments that remain, that nothing be lost."

Many of our farmers have energy, and work hard, and make good crops, too; but at the close of the year's operations fail to realize any profit, because they neglect "to gather up the fragments that remain"; for it is in the fragments mostly that the profit is to be found.

There are so many ways and occasions for the profitable exercise of this important virtue that it is impossible to enumerate them all. I only propose to mention a few of the most important, and the first that of labor.

Here in the South there is more money lost in the improper application of labor than in any other way whatever, and the present stunted condition of our people is due, in a great measure, to this cause. Much of the land cultivated here does not pay one-half the cost of its cultivation. It is strange, indeed, that they should persist in a habit that is so obviously unwise and ruinous. This habit was acquired when labor was abundant and cheap, and our people are so much wedded to their old habits that they have not yet realized the necessity of an entire change of these habits,—or rather they have not wrought themselves up to the point of *making* the change. Talk to them about these things, and they will acknowledge the truth of everything said, but will still pursue the old beaten track. They say that their land is all poor, and what else can they do. The answer to this excuse is, you must either confine your cultivation to such land as will pay, or you must use the fertilizers on the poor land, so as to make a paying crop, and go on and adopt a good system of improvement and permanently improve the poor land; and this can be done mainly by clovering, and by saving and applying everything on the farm that can be converted into manure.

Labor is money, or the equivalent of money, and we should exercise as much economy in its expenditure as in the expenditure of our dollars and cents. Our laborers should receive our constant attention, and be made to discharge their duties faithfully. The duty and interest of the master does not lie so much in laboring with his own hands as in controlling and directing the labor which he employs; though it would not be amiss to lend a helping hand occasionally, just to let the hands know that he is not above doing it. There is necessary, on every farm, a directing, controlling, and superintending power, without which business will not progress satisfactorily. An intelligent, practical business man can accomplish a good deal more in this way than by working constantly himself.

Time is the next item in the account of economy which I propose to notice. Time is also money, or the equivalent of money. Ah! it is very often a vast deal more valuable and important. It is so precious, indeed, that our beneficent Creator has given us but one moment at a time. How important, then, to “husband the time,” and “count the moments as they fly,” and how criminal to waste or kill time.

In order to a proper economy of time and labor, the practical farmer should maintain order, system, and discipline on the farm. He should exercise forethought, and his plans should be well digested and matured in advance. Generally there are special seasons, opportune moments for each separate work on the farm, and when each is done at its own appointed time everything goes on harmoniously. On the other hand, when the farmer gets behind-hand with his work, and one operation begins to crowd upon another, con-

fusion and embarrassment ensue, sometimes involving the loss of much time and labor.

Early rising is another requisite for the proper economy of time, and the master himself should generally be the first to rise. It is all a delusion for him to think that the laborers are going to rise up early whilst he remains in bed; and it is equally delusive to suppose that he can jump up and blow a horn, as a signal, and then return to bed and expect his hands to get up and go directly to their work as if he were present. "He arose up early in the morning," is an expression that occurs very often in the Bible, and whenever the old patriarchs had any important work to do, they always got about it early in the morning. Early rising is indispensable to successful farming.

Much time and labor may be saved by the proper location of the buildings, farm-pens, and roads of the farm. When the buildings happen to be located at one end of the farm, a great deal of time must necessarily be lost in hauling and passing to and from the daily work. These buildings, if practicable, should always be located in the centre of the farm, and as convenient as possible to wood and water. On many farms a great deal of time is lost in hunting up tools that have been misplaced. No suitable place is provided for them, and when the laborers happen to stop using them they are carelessly thrown aside, and when they are again needed, very often a day is consumed in hunting them up.

On every farm there should be provided a safe and suitable place for storing away the agricultural implements and tools of every kind, and the master should see to it that the laborers lodge them there whenever they stop using them.

There are many other items to be brought into the account of economy. There is the saving of everything that can be converted into manure—such as ashes, bones, dead animals, the droppings of cattle, &c. Dead animals should always be put into the compost heap. A dead horse will make some eight or ten loads of excellent manure, if composted with stable manure, woods-mould, muck, &c. Every bone should be saved for a similar purpose,—for bones, when composted with strong stable manure and allowed to remain in bulk two or three months, may be as effectually decomposed as if subjected to the action of sulphuric acid.

In conclusion, allow me to admonish our people to heed and treasure up the beautiful text at the head of this article—"Gather up the fragments that remain, that nothing be lost."—W. HOLMAN, *in American Farmer*.

Cumberland county, Va.

The *American Patron* does not understand why the National Grange needs a large capital, and thinks the money constituting the National Grange Fund should be distributed among the Subordinate Granges.

[For the Southern Planter and Farmer.]
TUCKAHOE FARMERS' CLUB,
OF HENRICO COUNTY, VA.

Our Club convened on the 8th of this month (July) at "Sunny Side," the residence of Mr. J. M. Vaughan. The day was pleasant, and the recent delightful rains following a good harvest served to relieve the farmer's wonted despondency, and made the day very enjoyable. Mr. Vaughan here works a large farm; he is an ardent, practical young farmer, well understands his business, and pushes it vigorously. An inspection of the premises met the favorable judgment of this severely critical Club. Besides the harvested and growing crops, we were shown some fine stock, and at its head stands "Wingfield," the fine young Hambletonian Stalion.

I give you below a few hurriedly prepared notes on "Hungarian Grass," which was read to and approved by the Club. No particular merit was claimed for it, save that it may suggest but an idea to the inquiring farmer.

Mr. James A. Cowardin took up the idea and approved of this rich, nutritious grass, and urged upon the Club their attention to the very great importance of raising an abundance of grass to sustain our lands, keep up to good standard our stock through the severe winter, and bring them out in thriving condition at the spring of the year, and with all kinds of hay for forage we might then dispense with the unprofitable and expensive pulling of fodder.

Mr. Cowardin will give us a written essay* next month on the subject of "raising grass to meet the present necessities of our lands and stock with a view to our fall seeding," and Dr Crenshaw and Perkins, and Mr. J. M. Vaughan have been charged with the duty of reporting on "Fall ploughing and the advantage of the use of the subsoil plough, with particular reference to our various lands."

The Club adjourned to meet with Mr. Thos. Johnston in August.

Yours,

J. A. LYNHAM,

Reporting Sec'ry.

*[We will publish Mr. C's essay in full in our next issue.—ED.]

NOTES ON "HUNGARIAN GRASS,"

FOR TUCKAHOE FARMERS' CLUB.

We think that the time has come when there should be more diversity in our farming pursuits, and to us, at least, located around the rapidly improving city of Richmond, we should cut loose from the old idea of raising nothing, and attempting nothing in the way of farming, but the all-absorbing idea of a constant succession of corn, wheat and oats. We suppose that it must be conceded by the Club that such a practice (as experience teaches) works but an impoverishment of our soils. It is a principle—yes, an inexorable law of

nature, which no amount of theories or learned essays can estop or controvert—that solid food must be returned to feed the earth.

We deal with this subject practically and plainly, and propose no technical, chemical treatise. We will tell you, that if by the use of commercial guanos and the manipulated articles now imposed upon the agricultural community, you hope to thus feed your land and satisfy its cravings, you are but stimulating it to its death.

To grass then, in all of its forms, seeded not only in autumn and in early spring, but even in June and July we would invite your attention. No other system can be adopted now for the restoration of our southern lands, but the putting down of a large surface in grass: for the earth is hungry for it. It is strange that more attention has not been given this subject. Richmond is one of the best hay markets in this country, and besides the improvement to our lands, here we can find ready and abundant sale for every bale that we can make. Yet we neglect this and send north for our hay. But this is somewhat a diversion from the subject we were called upon to consider and report, and that is—as to the merits of the Hungarian Grass. The chairman of your committee is here able to present for the inspection of the Club, a sample of this grass (about four feet high) taken from his crop, harvested on the 6th day of the month.

Although claimed to be a species of Millet, it will be perceived, that its growth, blossom and seed are distinctively different. The seed are of variegated color, different from the white Millet seed, and heavier and richer, we think, in nutritive properties. This Hungarian Grass, we learn, was introduced into France (where now its cultivation has been greatly extended) in 1815, and subsequently introduced in this country through the U. S. Patent Office.

It is an annual forage plant and germinates readily, while it thrives best under the effects of a warm sun.

It withstands drought remarkably, and as Flint says, “remaining green even when other vegetables are parched up, and if its development is arrested by dry weather, the least rain will restore it to vigor.”

We are not able to tell you the exact chemical properties of this plant, but we can say, what may be equally as instructive, that its numerous succulent leaves furnish a green fodder, which remains green until the seed mature, and is very fattening and much enjoyed by all stock.

The cultivation of this grass addresses itself to our favorable attention particularly this year. For on account of the very unpropitious season, our general hay crop is very short and spring oats almost an entire failure. But we have plenty of time even *after* the ascertainment of this fact to make up for this great deficiency by the use of this grass. It should be sown broadcast from the first of April to the first of July) and even as late as August) at the rate of one bushel per acre, only avoid the frost, which is very injurious to it. The land should be well prepared, ploughed deeply, and harrowed until finely pulverized, and the seed *rolled in*. It is best suited to a

light or medium texture of soil, and upon high land—and not upon wet or meadow lands. This grass should be harvested when the crop is in full bloom (usually in about six weeks from the time of seeding). If permitted to remain until the seed fully mature, the stalk becomes hard and sometimes dry, and is then not so much relished by our stock. It is said to be most excellent for milch cows, increasing the flow of milk largely, but, as said before, all like it—and horses seemed particularly to enjoy it as a desirable change to them. It is a good appetizer, and its properties very fattening; and for soiling purposes no grass is better adapted. With proper cultivation it can be made to yield from two to three tons per acre. But it is necessary to remark that the Hungarian Grass may be classed as a “heavy feeder,” but upon the other hand it will repay this attention. The land should be in good condition and freshly manured at the time of seeding. Finally, we suggest to the members the seeding of one or two acres as an experiment, which will likely lead them to introduce it more largely, and retaining this green hay for their own use, they will be enabled to sell more largely of clover and timothy.

J. A. LYNHAM, }
J. G. BEATTIE, } *Committee.*

REMEDY FOR SMUT IN WHEAT.

A farmer in Ireland whose wheat was much affected by smut, succeeded in remedying this evil by adopting a simple preventive which he learned had been practiced successfully in Flanders for many years. The remedy is a steep composed of sixty pounds of quick lime and thirty pounds of salt made into a solution sufficient to cover 600 pounds of wheat.

In order to test this remedy, he procured the worst smutted wheat he could find, and after steeping for different periods, he sowed 112 pounds, divided into four equal parts, on equal portions of land.

No. 1, merely steeped so as to cleanse it.

No. 2, steeped in the solution 12 hours.

No. 3, steeped 24 hours.

No. 4, steeped 48 hours.

At reaping time No. 1 was dreadfully black. No. 2 had a good deal of black in it. No. 3, none at all. Nos. 3 and 4 swelled very much, but did not burst. No. 2 swelled also, but not so much. Seeing that No. 3, which was steeped for 24 hours, succeeded as well as No. 4, he has practiced steeping for 24 hours, and has continued to do so with perfect success for thirty-two years. He has not had the slightest appearance of smut in his wheat since he commenced using this remedy. After taking the wheat out of the steep he lets it lie in a heap to drain. In broken weather he has kept it after being steeped for ten days, turning it every day, without any bad results.

TOO MUCH COTTON.

Writers have harped upon this old hackneyed theme without effect, until many have laid aside their pens in despair; but they should hope on, hope ever, and never give up their faith. Many ministers have preached to the same people for successive years, without any apparent effect, until tempted to believe that they—the hearers—were as hard-hearted as the granite rocks that sprinkled their native hills; but finally, a great revival would break out—and O, what a change for the better!

Southern planters have been in the habit of planting too much cotton, and unfortunately the habit remains; even at the present writing, little rabbit-eared cotton adorn our hills and besprinkle our valleys—and what are the fruits now in May, 1875? Many are going about trying to buy a little corn, without either money or credit! O, ye cruel greenbacks, why have ye forsaken us? Horses and mules that looked fat and sleek in March, now begin to advertise their backbone and ribs so clearly that “he who runs may read.” Hogs, fat in March, have lost their energy, and lie up in the fence corners, afflicted with the dry rot or red rust, I don’t know exactly which. Pigs are drawing up and swelling about the stomach, which I guess has become *filled with gas*. Even the faithful old chanticleer has apparently quit crowing; while snakish looking, hide-bound curs—that our patriotic legislators are afraid to tax for fear of losing votes—are prowling about beneath the stars, killing sheep and tearing up hen coops! But still, to make things worse, bacon is “*a rising*,” and flour’s “*gitting up*,” while cotton is hardly paying the expense of making it.

It was once thought if we could get rid of the “carpet baggers,” that everything would work right. Well, this patriotic band of gentry has disappeared. Some have gone to the North—others to a warmer clime! But still, *something else seems to be needed*.

It was once thought if we could get laws enacted to prevent debtors from paying their just obligations, and make men possessing brains support those deficient in that important element of success, that all would be able to prosper and live; but this game has about played out, and capitalists and factors are shutting down the gates—and *something else seems to be needed*.

It was once thought that the cause of hard times may be found in the fact that many of our laborers, having no brains to direct their muscles, labor and manage to a great disadvantage. There is much truth in this, but *it is not the something needed*.

Finally, the *something needed* is more brains and less cotton, in reference to the whites. “They have had line upon line, and precept upon precept,” without effect, apparently; but necessity’s iron arms are now around them; they must capitulate to common sense, or the very life will be pressed out of them.

Strange, remarkably strange, that the South could support herself

while vast armies devastated her territory with fire and sword, and while her strong, vigorous sons were nearly all upon the tented field, and now can scarcely do it, though peace reigns and genial showers fall. But the secret is easy to discover. *Too much cotton! Too MUCH COTTON!*

Since engaging in agriculture, I have invariably planted as much corn as cotton, and this year have nearly as much land in oats as cotton.—JAS. H. OLIPHANT, in *Southern Cultivator*.

[For the Southern Planter and Farmer.]

THE PREPARATION FOR WHEAT.

The preparation for wheat is a subject which our farmers have to consider and decide upon during this month, if they have not already done so.

For some years past the weather has been so unfavorable for summer fallowing clover or sod land, that many farmers have stopped trying to make that preparation for wheat; but plant corn on land that they would have reserved for that crop, and sow on the corn stubble the next year. Along with this abandonment of summer fallow, there has been a great falling off in the yield of wheat; and the corn being planted on sod or clover land, there is a great increase in the complaints to that crop from cut and bore worms.

Oats having for some years brought more money per pound (often double) than corn, I would suggest that it would be more profitable to substitute oats on all highland that is at all liable to be washed by the heavy summer rains, in the place of corn, and especially on all such hill land as will not bring, in a moderate good season, seven or eight barrels of corn to the acre.

The oats on such land, after deducting the difference in cost of cultivation, would probably bring as much or more net money than the corn crop; a less weight would have to be hauled to market, and the great loss of fertility to the land, from the washing done by every heavy summer rain would be probably avoided, which last is generally greater than would be caused by the successive removal of several heavy crops which do not cause or permit such a destructive denudation of the soil.

If, then, it be found in any summer that the clover cannot be fallowed in time for wheat, or if there is a sod field which would be left for summer fallow, but for the almost certainty that there will not be seasonable weather enough to plow it in, if we wait, instead of planting in corn, especially if it is hill land or at all liable to wash, sow it in oats, even though you have to shorten your projected corn crop considerably to do so.

Put the labor thus saved on your bottom or level land corn, and on your tobacco, and you will find that though the area cultivated may be considerably diminished, yet the crop will not be so very much shortened, and the oats will make up the difference or more.

As soon as the oats are cut—and don't be too careful about saving what grows on the poor spots, where the oats require as much time and trouble to save as they are worth—haul them up and start your plows on the stubble, and sow some buckwheat on the freshly plowed land before a rain has fallen, if you can.

There will always be oats enough left on the ground to seed it pretty thickly, and they, with the buckwheat, will spring up with the first rain; and, in an ordinary season, by the middle of September, will cover the land with a thick growth of green vegetable matter. The ground having been plowed in the winter or spring previous, will plow easily, when a clover or sod field would be impenetrable.

About a week before you wish to sow the wheat, cross-plow the land, or, if impracticable, lay off the plow-lands so that the plow will not run in the old furrows, and if the growth is heavy, put on a chain so that it may be well covered.

Just before sowing, level with a harrow; the week's interval, will give time for the oats, whose roots were exposed by the plowing, to die, so that they will not revive on being covered afresh by the harrow, and the harrowing, besides leveling the land for the drill will kill or cover the oats, whose roots were not exposed by the plow.

The greater part of the growth not covered up, will, by that time, have so withered and shrunk, as not to prove an impediment to the drill, while the two plowings and harrowing will leave the land as fine as an ash-bank.

This is not theory, but my own experience on about twenty acres of land, which I thought too poor to bring a paying crop of corn, or even oats, but as I was anxious to improve it, and get rid of the running briers, with which it was covered, I tried the above mentioned treatment. I only got about ninety bushels of oats, but the hill was not washed, as the hills in corn were, and in September it was clean of briers, and hid by a growth of green matter six inches high. After turning under, &c., I sowed about 28th, 30th of September, one bushel wheat to the acre, with two hundred pounds Eureka guano on half, and the same quantity of Guanahani on the rest; being one ton of each on the twenty acres. The soil is mostly pure red clay, with some gravelly places, such as is common along the southwestern mountains, naturally good, but badly worked down by eleven years tenant's cropping. The Eureka cost \$50 per ton, cash; the Guanahani, \$40 cash, making the cost per acre for guano, five and four dollars respectively.

I have not threshed the wheat yet, but would not take ten bushels per acre for it. I think it may yield twelve bushels.

Adjoining land of the same quality which was sowed in wheat the year before, after a late oat fallow, without the second growth being re-fallowed and fertilized with 200 pounds of Eureka, brought only six bushels per acre, and has no clover on it, except in the depressions, and very little there. This year the land re-fallowed, &c., has

a tolerable sprinkle of clover, in spite of the cold spell in April, and subsequent dry weather, which was so destructive to our grass crops. If the difference is owing to the green stuff turned under, it will show that green manuring is worth more to such land than guano.

I watched the growth and general appearance of this wheat pretty closely all through the season, as I considered it a pretty fair test of the relative merits of the two fertilizers, the land being of pretty uniform quality, and all sowed in about three days. Until late in the spring there was no perceptible difference in the wheat, but before harvest the heads, where the Eureka was sowed, seemed longer and the straw larger; and, I believe, there is a difference of about two bushels per acre in favor of that guano.

Putting the wheat at one dollar per bushel net, and deducting the extra cost per acre of the Eureka, over the Guanahani, it gives me a profit of one dollar per acre, for the land on which the Eureka was used, over that on which the *same quantity*, net value, of Guanahani was sowed.

I am inclined to believe that if I had used the same value per acre of each, viz: 200 pounds of Eureka, and 240 of Guanahani, there would be no perceptible difference.

Considering the trouble of hauling and handling the greater weight, the Eureka, at \$50, is cheaper, I think from my experiment, than the Guanahani, but if the price of Eureka has been raised to \$57.50, as I was informed last spring to be the case, then my experiment, I think, demonstrates that Guanahani, at \$40, is the more profitable guano to use on such land as mine, if the company keeps up the standard, which is not always done after a fertilizer makes itself a reputation.

I hope some of your other readers will give us their experience in the preparation of land for wheat, and use of fertilizers, in time for us to be guided by it in sowing the next crop. I would like to have been able to give you exact measure, instead of my estimates as to results, but if I put off writing until I thresh my wheat, you would not be able to publish the results in time to be useful to the farmers this season.

H. M. MAGRUDER.

Charlottesville, July 14th, 1875.

[We hope our correspondent will, if possible, weigh or measure the products of the two fertilizers separately, and report to us, as we think such results ought always to be given to the public.—ED.]

[For the Southern Planter and Farmer.]

PLAIN TALK TO FARMERS.

Wherever I go the cry of hard times assails our ears, until I could wish to be entirely destitute of hearing, and but for feeling a good share of it myself I might not send you this brief article. Last week it was reported that the banks in New York were overflowing with money on deposit and interest at two and half per cent. per

annum, and the Federal Government about to issue \$60,000,000 more in coin. This looks a little strange, and yet is in striking contrast with the want of money all through the South and West. If people will buy more than they sell, the result is the same; money will accumulate in the North and the cry of hard times will continue. With the issue of more money, goods are *immediately inflated*, but *land* is the *last* thing to feel the influence of an increase of money, and if there was a guarantee of holding and keeping money in the South and West, a little more or a good deal more would be very acceptable. But I doubt the prospects, and the surest way is to try and live within one's means. If our income is \$500 or \$1,000 it is better to reduce expenses and pay as you go. Let us come more plainly to the matter. Try a dairy farm and attend (not pretend) to it. If the farmer has boys or girls or a wife, let the milking and churning be done by the family. If cooking can be done without producing prostration of body and sickness, and doctors' bills, let that be done also; and the \$150 in hire and food can be saved, and each member of the family practically educated in household duties. If the members of the family attend to their own rooms there is the saving of another \$150. If the head of the family can do without a horse there is a saving of \$150 in food which the horse eats. If there is \$50 or \$100 spent in ardent spirits there is a saving in *every* respect. If the members of the family can do their own sewing there is a material saving. If the family have no sewing or washing machines let them enter the Grange and buy a number one Whitney Sewing machine for \$35.00, or a superior Washing machine at 50 per cent. discount from regular rates. By doing their own work they will save several hundred dollars in money, will acquire habits of industry and economy, and build up a bodily constitution, out of which doctors cannot get the chance to make bills. Suppose we go a little farther and look into the grocery items. Stop buying jellies, and preserves, and pickles, and lots of other things which ought to be made at home. If any money be left let it be spent in adornment of your house and in the purchase of useful books (not trashy novels) instead of the decoration of the bodies of the children and grown ones in tinsel and all the gew-gaws of the changing fashions. If farmers would educate their children to cultivate their brains and their hearts instead of their pride, more domestic happiness and more money would abound. This is where the shoe pinches. The old absurd notions of bodily labor being degrading has to be uprooted entirely. It is no more disgrace for a wife or a daughter to do her work in milking the cow, cooking, sewing and all manner of household work, than it is for the husband and son to chop wood and cultivate the land. If farmers would carry out these views many of them might save themselves from bankruptcy; but they must try to keep up appearances and pretend to be supporting their families when in most cases they are living on other people. The disastrous failures of merchants, &c., are owing to the large unpaid bills of

farmers, whose families have been too proud to labor, and whose legacy is generally a life time of grinding poverty and domestic unhappiness. Such a course followed throughout life by any family will save thousands of dollars, and will redound to the industry, intelligence and health of each member—constituting what ought to be of first importance, “*Sana mens in corpore sano.*” If farmers will continue to mimic the fashions and fooleries of people far above their means, the cry of hard times will be continually heard, and what is worse, they will not be able to meet with any success in their calling. They will starve their land and starve their stock, and in the end will starve themselves. Who has the great want of the times—the *courage* to stop their household expenses before poverty comes in at the door, full banded and drive the family out of doors to log huts and dirt floors.

C. R. C.

[For the Southern Planter and Farmer.]

TO THE LITTLE FARMERS OF VIRGINIA.

Had we little fellows been cutting our garments in everything since the war, strictly according to our cloth, how vastly different now would be our condition and the general prosperity of Virginia; and the sooner we now begin the better for us all. Learn to do within ourselves all we can; quit buying and go to making for ourselves. Make your own peas, buckwheat and rye for fallows. Buy agricultural lime, salt and plaster, they are cheap, and we know them good and reliable. Use them together freely and you will never regret its use. I speak from experience. I have made from the pea fallow 10 bushels of wheat from one seeded; from buckwheat fallow eight for one; from the high price manures made at the Charlottesville manufacturing company, three for one, all seeded in time and farmer like, the very best preparation in my life, and all the same year, as fair and honest a trial as was ever made any where and by any one. Now count the cost and profits and decide for yourselves. I am in receipt of a letter written on the 9th from near Fredericksburg, Va., which says, “After oat harvest last year he seeded buckwheat for a fallow for wheat that day, the 9th of July, he had threshed out 25 bushels of wheat to the acre.” How many buyers of high price manures can say the same. Then count the cost. I contend with peas and buckwheat as a fallow with two bushels oyster-shell lime, a bushel of salt and a bushel of plaster, per acre, I can beat one half the manure buyers I have seen, and if the dose will be repeated in January or February, it will beat them all. Now let all we little fellows try an acre if no more, and report honestly next fall through the *Southern Planter and Farmer*, give it a fair trial, and all Virginia will go to it in full faith next year. Then will old Virginia begin again to unfurl and hoist to the breeze her gay, cheerful and prospering colors to an admiring world.

I got some agricultural paper sent me from somewhere, I can't say

from where, as in my feeble condition I am unable to find it, or I would send a copy of the well written article to your *Planter*. The article says all his money was laid out in a rather poor farm, and stock to work it; had no money to buy manure, too uncertain to extend his credit, he resolved to try a standing lot in tobacco, around his tobacco barn near his dwelling. He raked up all the manure he could and applied it to his lot, and put it in tobacco; the crop was meagre, owing to the thin application of wasted and spent manures. When giving it the last working he sowed rye and a bushels of plaster per acre. Next May and first of June he plowed in a good crop of rye, harrowed in good nice order, reversed the colter in its beam and marked off very slightly in checks, drew up a small flat hill and worked the tobacco without disturbing the rye which gave moisture and food for the crop which kept green and grew during a dry season, when manured lots failed. Made a good crop and thus continued the rye and plaster without any other manures; and the crop of last year was the fourteenth crop, which was the best crop he ever made and of better texture than any he ever saw from manured lots, and never had a cut worm. All his manures were applied to other crops and lots, and he had made better crops and improved his lands and his own condition more than any one of his neighbors. Now the rye he made, the bushel of plaster he bought, count the cost on his tobacco lot, and the high price manures others have been buying, and go do like him, and you will, like him, do well. There is so much good practical sense in this article, I shall make my tenants try the rye this crop; on its last working will add two bushels of lime and two of salt on the rye in January and February, or on the rye at the time of plowing it in. The salt I know from experience to be good for tobacco; have seen it prevent its firing in the field. Now little fellows, for there are more of us than one would suppose, let us all try a little of pea and buckwheat for our wheat crop, and rye for the tobacco, and report, and let us all try to rally from our long line of little fellows to what we are to be thrifty big fellows. Great luck to all sensible little fellows who will wisely try it.

Yours truly,
JOB LITTLEFELLOW.

[We are happy to find Job a man of wisdom as well as of patience. There is a good deal of common sense and wholesome advice in his article.—Ed.]

[For the Southern Planter and Farmer.]

THE WHEAT CROP AND SHEEP RAISING.

Here, on the Atlantic slope, the wheat crop has become so precarious and uncertain, and prices so low, that the conviction is forcing itself upon us, that we must either discontinue its cultivation in a great measure, or so modify and change our present system as to make its cultivation more remunerative. Under present conditions the farmers of Virginia are sinking money in the cultivation of wheat. There is no doubt about this, which a plain statement

of facts will show. The average yield of wheat in Virginia is about eight bushels per acre. At \$1.10 per bushel, which is about an average net price, the gross product per acre, including the straw, would be about \$10, every cent of which will be covered by the cost of cultivation, leaving other incidental charges with which the wheat crop is justly chargeable, a dead loss.

What is best to be done under this state of things, is an important practical question at this time. The first and most natural conclusion would be to discontinue the cultivation of wheat entirely as a leading staple crop. But extreme conclusions either way are generally erroneous, and a little reflection will convince us that it would be unwise to adopt so radical a change. We are bound to keep up its cultivation, but upon a system much modified and changed. We must cultivate smaller crops, and only upon such lands as will yield from 20 to 25 bushels per acre. Here, in the tobacco-raising regions, our main chance for making wheat is from the tobacco lots and clover fallow. Wheat scarcely ever fails to grow well on tobacco lots, and by applying from 200 to 400 pounds of some good fertilizer per acre, in addition to what was applied to the tobacco, a paying crop may be made. And in the case of a clover fallow, if a good crop of clover can be turned under, the fallowing done early, say in July, and a thorough preparation made and seeded in time, remunerative crops may be also had from the clover fallow. The old practice of cultivating ordinary corn land in wheat, either with or without fertilizers, is simply ruinous, and should not be thought of any longer. Let the corn land remain for oats in the spring.

This radical change in our system of wheat cultivation, will make it necessary to supplement the wheat crop by something else. And the first and best chance is sheep husbandry. Here, in Virginia, where there are such vast quantities of open lands not cultivated, immense numbers of sheep might be raised and at so little cost as to make this branch of industry exceedingly profitable.

The climate of Virginia is most admirably adapted to sheep raising. Our winters are often so mild that sheep may be subsisted almost the entire winter without feeding. A few years since, the writer carried his sheep through the whole winter with only one day's feeding.

The only obstacles in the way of sheep raising in Virginia are, negro stealing and dog-killing. These two obstacles make up the universal standing excuse for the neglect of this very important interest. Now, in the first place, there is no branch of business either in connection with the farming interest or any other, that is not attended by its own peculiar difficulties and drawbacks, and those incidental to sheep raising are no worse than others. But there are none of them that cannot be overcome by the proper care and attention, which are indispensable to success at anything. In the next place, there is a remedy for thin soils attending sheep raising, and that is to pen them every night, and keep a sharp look out for the dogs

and sheep stealers. Suitable enclosures should be provided, as near the homestead as possible, and it should be made the business of some one on the farm to pen them every night. Until a few years back, the writer, in common with others, was a constant sufferer from these depredations from dogs and rogues. But about three years ago, he determined to try this remedy of fencing, and the result has been that he has not lost a sheep in this way since. And for the benefit of others I will give my plan of management. For this purpose I have two small lots of two to three acres each enclosed, very near my dwelling-house. On one of them is a large comfortable shelter, closed up on the north and west sides, and open to the east and south. During the winter months the sheep are penned regularly, and fed when necessary. In the spring they are taken off of this lot, which having been manured and enriched by the droppings of the sheep during the winter, is ploughed up and cultivated in vegetables. The sheep are then penned on the other lot, and continued then until the fall, when they are returned to the winter lot. The second lot has been put down in grass and furnishes the sheep with grazing during the night. This lot is also enriched by the droppings of the sheep, and my plan is to put it in turnips every third year. This plan might be improved upon by having three lots instead of two, so that the two summer lots might be alternated by grass and turnips. Here, in Virginia, where there is so much vacant land, every farmer should keep a flock of sheep, for it would not only enable him to live better and make more money, but it would also enable him to improve his land. Again, here in Eastern Virginia, there is too much reliance upon bacon as a diet, which is not only more costly but is also unhealthy. Beef and mutton are much cheaper and vastly more wholesome.

In regard to the dogs, I keep none myself, and make it a rule to shoot every one that comes on my premises unaccompanied by the owner.

In order to show how remunerative sheep raising may be made, I will mention a few examples. For the first I refer the reader to Col. Ruffin's letter upon the subject, published in the January number of the *Planter and Farmer* for 1874. Col. Ruffin states, that in 1872, he realized a profit of 237½ per cent upon the cost of his flock for that year.

I will farther give two other examples that have come under my own observation. A gentleman of my county a few years ago, commenced with less than a dozen sheep. He has ever since been gradually increasing his flock and his yearly profits until the present year, when he has sold lambs and wool enough to bring some six or seven hundred dollars.

A near neighbor of mine a few years ago purchased 100 sheep, for which he paid \$300. The first year thereafter, he sold very nearly enough lambs and wool to pay for the whole flock.

There is no doubt of the fact that sheep husbandry might be made

exceedingly profitable in Eastern Virginia, and it is the strangest thing in the world that our farmers should not put sheep on the poor lands, instead of cultivating them with hireling labor, or allowing them to grow up in old field pines and broomstraw.

SOUTHSIDE.

[For the Southern Planter and Farmer.]

LETTER FROM ALBEMARLE.

Your very kind favor of the 6th, with its accompanying good papers, reached me on the evening of the 7th, for which please accept an old friend's heartfelt thanks. The time at which they reached me seemed so appropriate, for I was then feebly reclining in my old arm chair, slowly recovering from a very severe and almost fatal attack, caused by a visit to my farm, which proved to be far too much for the little strength remaining to me from the attack of paralysis one year ago from the fifth of this month. I was at the time silently musing over the happy, prosperous times the good old *Planter* and its many prosperous writers and readers then so much enjoyed, and so generously divided with all, coming from everywhere—then when the good old Virginia hospitality was a familiar household word the world all over. Alas! where now are so many of its cheering and instructive writers and its kind, warm-hearted readers? Gone where you and I must shortly go. How sadly different now is everything in Virginia to what it then was. It is, indeed it is, a most sad and sickening picture for any, but more especially for we Virginians, to contemplate; but clothed in the dark drapery as Virginia's prospects seem of late to have been, I cannot help thinking, believing, and most fondly hoping there is a far better and more prosperous time in the overflowing lap of an early-coming future to cheer up we desponding sons and daughters of our noble old parents of 1776, by which our spirited, noble young Virginians may and will be encouragingly stimulated not only to rebuild, but to far excel, any point of prosperity Virginia has yet known.

God gave to our noble old ancestors a most glorious country and climate on which to operate, and well did they faithfully perform their whole duty, and most liberally and lavishly did we, their descendants, enjoy and divide with all and every one, coming from any and everywhere. It is now lost to us, and sad was its loss, and most grievously felt by the world. No wonder so great a shock should have thrown us all into the great confusion which has thus reduced us to what we now are. But, my dear sir, is it not our duty to our God, to our country, to ourselves, and to those dear ones coming after us, even trembling as many of us now are upon the very verge of our graves, to wake up, arouse and rally to our mightiest effort, to find out and establish some firm foundation of improvement which all may safely follow and by which all can surely prosper, and so train those so dear to us all to act and do for them-

selves that we may have the sweet consolation on our death beds of believing that they can and will make our dear old State what we all so well know Virginia can and ought to be—the bright, cheering, happy home of the truly good and the great.

We Virginians still have our fine productive lands, our pure water and invigorating climate, and we are still a warm-hearted, generous, clear-headed people. All we now have to do for a full development of Virginia's great resources, is simply to give all of these our well known blessings a fair chance. We of Virginia and the sunny South were reared in those grand old times of almost universal prosperity, to look almost exclusively to the *Bulks*, which in those thrifty times were generally so entirely satisfactory as by them to be fully able so to cover over all of these little deficiencies as rarely, if ever, to be annoyed by them. But ah, it is not so with many of us now. We sadly feel and clearly know it. Then let us honestly acknowledge and wisely act upon it; for those cheering, grand old *Bulks*, when now ever made, are too often like the Indian's gun—cost more than it comes to; and these thousand and one little things rise up thickly on every side to oppress and worry us. In truth, we southerners have committed many great and grievous blunders; but so did our great and good Gen. Lee, the sainted Jackson, and the many thousands of their brave and generous compeers. The great wonder is we all had not committed greater and more of them. One great and sweet consolation is, we all did our very best.

Now that the echo of battle has been hushed and its smoke cleared away, and we have become a calm and reflecting people, do let us resolve to show to an admiring world what they have a right to expect of us—that we are Virginians still, and that we can and will make our dear old State, rudely misused as she has been, Virginia again. What a great and thrilling incentive to us all to rally and do our very best; and may our wise and good Heavenly Father aid and bless us all to the full accomplishment of fully reinstating Virginia at least to what she once was, the good, wise, and great elder sister of the world's wide renowned, the gallant Old Thirteen (13). To effect which we must bring our clear Virginia brains to a calm and manly reflection, correctly calculate our liabilities and fairly estimate our resources, and then honestly meet our creditors and come to a good old Virginia honest, fair understanding; then, like Virginia men and women, boys and girls, go to work, and by the blessings of God we all will soon find it an easier, more pleasant and successful road than going to law with the troop of hungry, heartless lawyers yelping us into a disgraceful and ruinous defrauding of those we justly owe, by which we too often find the creditor but little if benefitted at all, we are ruined, and the lion's share divided between the clerks, sheriff, and lawyers.

My dear sir, in those good old times for which we now so often and uselessly and sadly sigh, was there not (to secure success) such an indispensable article as Preparation? Have we been, or are we

even now, prepared for the great change which has come over almost all and everything left us? I fear we are not. Then our great success and ample means placed us far out of reach of any and all the little things; but now there is so rarely such a thing as success in the greater things, and we are left too often sadly floundering helpless and alone amid the troubled waves of little things thickly gathering all around us, have not our agricultural writers committed a mistake in writing too glowingly of the few isolated instances of high success, thus tempting too many to try and do likewise where so few were able, and thus more deeply involving so many? Why tell a Virginia farmer of the high pressure farming of our successful countryman, Mr. B. H. Brenhan, of Carlton? He has the means, and well and wisely is he using them for the amusement and profit of himself and children, and to the perfect and beautiful development to all observers what Virginia can and will do under proper care and effort. But, alas! who of us can do likewise? None—no, not one. Then, whilst we with grateful hearts ask a God speed to him for all his noble, generous efforts, hadn't we little fellows better be wisely turning (at least until we can do better) our attention more closely to the little things upon which we and ours now so much depend for peace, happiness, and success, and humbly learn therewith to be content? Do this, and we will have well secured the ticket which will safely and surely land us at the desired depot of a clear conscience, good spirits, and ample success.

Now, my dear sir, will you and your many readers kindly forgive an old friend for writing of facts he saw with his own age-bedimmed eyes on the last three visits to one of his farms, anxious to know how my clover and the grass seeded on the wheat land had taken. Feeble as I was, I slowly walked over the field, and was surprised to see the seedsman could then be traced by the deeply-impressed footprints as he varied in width, from fancy or inattention. The land had not all been seeded, because the seed had given out, owing to too thick sowing. I had directed a lot to be seeded at the rate of two bushels of orchard grass per acre, and a lot to be seeded in Randall grass at the rate of a half bushel to the acre (thicker than I had ever sown it before) for seed another year. The orchard grass and Randall grass were continued at the rate of two bushels or more per acre until all was thus wasted. I had directed, after the two lots were seeded at the rates above stated, the remainder of the seed should be applied at the rate of a half bushel of orchard grass, a gallon of Randall grass, and a half gallon of clover seed per acre, for hay and pasture. The clover seed made on the farm was (pugy) mixed with the oat chaff, with which I had directed the chaff from the orchard and Randall grass seeds to be well mixed for the purpose of sowing about 70 acres of land my tenants were to have prepared and seeded with winter oats. The gentlemen renters were absent, and their three hired freedmen were hauling out and seeding a field of 70 acres, seeded the spring before, which had been badly

injured by chinch-bug and drouth, because my tenants had failed to prepare the oat field. I rode down and was surprised to see them throwing it out from the wagon as if carelessly trying to fill gullies. I halloed to and stopped them. It was the last load but one. I showed them how to sow them; how long they continued as I directed, they may know; I do not. The seed, which was ample for the 70 acres, was thrown in dabs over from two and a half to three acres, and of course thrown away. Query: May not the failure of our grass stand since the war be justly attributed to this carelessness, inattention, and often thefts?

My last visit was on a Saturday. The orchard grass seed had been cut on the morning before, and the dew hardly had time to dry out of the bundles, in dozens as it was. My good tenant said he was going to haul it up that evening. I advised him not to do it, for he had more hay then spoiling from not being timely secured than he could well attend to that evening, and let the orchard grass seed alone until Monday: then take a sheet and shake and knock each bundle with a small stick, and he could save more good seed than if he were then to haul it to the machine, and damp as it was it might spoil: and I could clean it better by the wind than with the wheat fan, and it would then do to put away in the boxes. I was too feeble to do more than advise. I heard they were hauled up, and, from the yield, fear the best were lost. Now, it is these and other little things that keeps so many of we little fellows' noses to the grindstone, of which I will more fully write in my next, if desired. A widow lady uses an empty flour barrel and saves them all; she runs the head of the bundle in the barrel. She keeps a boarding-house for the students at the University of Virginia. She put a single head of fresh fish in the corn hill in her garden. I counted eight shoots on one stalk—frequently seven. Those under which none were put was not half so high or luxuriant, and no shoot developed. If the farmers of Virginia would take a lesson of her, repudiation, hard times, and croaking would soon give place to cheerful prosperity.

Yours truly,

G. C. GILMER.

[For the Southern Planter and Farmer.]

ORCHARD GRASS.

I have written several articles on orchard grass, but as I consider it a subject of the greatest importance, I hope I may be excused for keeping it constantly before the public.

All things considered, there is no grass that can rival orchard grass as a general farm grass. What are the uses of grass on a farm? Hay, pasturage, improvement of the soil, and grass seed. There is certainly no grass that will make as many pounds of hay to the acre and yet be equal to it in quality; it is fully equal to timothy in quality, and will always make more hay. As a pasture grass it

is *fully* equal (and I think superior) to our native blue grass, which is hard to excel. As an improver I consider it better than clover, for this reason, it forms a heavy compact sod, and the bulk of vegetable matter will weigh three or four times as much as the clover on the same ground. This though not equal in quality, as an improver it excels in bulk more than enough to make up the difference. Good land well set will produce from 15 to 25 bushels of seed to the acre, and as it costs but a few cents a bushel to cut it and thrash it, it is one of the most profitable crops we can raise. No one can fully understand the value of orchard grass, until they have used it a few years. If you have a field set in orchard grass, you are certain of *some* hay, let the season be wet or dry, hot or cold. There are thousands of farmers in the United States who do not know what orchard grass is. My advice to them is to get twenty pounds of good clean seed, sow it on an acre of *good* land, wait until they make the crop the second year, (it never makes much of a crop the first year) when I think they will be disposed to sow a field or two. I sow in August or March. If you want it for seed, sow no clover with it, otherwise, sow twenty pounds of orchard grass and one gallon of clover to the acre.

W. F. TALLANT.

[We are disposed to place orchard grass above every other grass for Eastern Virginia, and fully agree with our correspondent in his estimate of it as a hay or pasture grass. But we must dissent from his opinion of its value as a fertilizer. Nothing in the shape of a green crop can equal clover in this respect on land where it will grow, and any land that will produce a good cover of orchard grass will also produce a good stand of clover. On any such land we believe that the roots of clover alone after cutting the crop off would be worth more than the whole crop of grass if turned under when at its greatest bulk. From seven to twelve bushels of seed per acre has always been considered a good yield, and it will more frequently fall under the lower figure than go above the higher.—ED.]

FARM TOOLS AND MACHINES.

Tools are required on every farm, and on most farms of any size machines are all used. Consequently every farmer is interested in the subject of this article; he is probably aware that his success or his failure in business will in part depend upon the kind of tools and machines which he employs. With poor tools and inferior machines he cannot successfully compete with his neighbor who uses the very best. Yet it is probable that he has never carefully considered *how much* difference it makes with a farmer's work whether he has poor tools or good ones. Take, for example, a common shovel; set a hired man at work with one that is thick, heavy, dull and rusty, and, if he is faithful at his work, he will get tired out long before night, and will not have accomplished as much, by at least a fifth, as he would if he had been provided with a nice, bright, sharp shovel. If he is not a good man to work, he will take advantage of the old

shovel to shirk as much of his labor as possible. In either case, a man will do enough more work in a few days with a good shovel, to pay for it, and not be near as tired as he was with the old one. With machines, the difference is still more striking. A man with two horses and a second-class harrow, can, in time, fit a ten-acre field for sowing to wheat. But the same man and team with a first-rate pulverizer will fit the land much sooner, and do it so much better, that it will produce from five to ten bushels more grain than if fitted with the old harrow. By using the very best styles of reapers and threshers, the time and labor of one or two men can be saved, as they do not require as much help and attention as the older and poorer patterns. These facts would seem to make it an object for farmers to use some care in the selection of their tools and machines; too often they buy what the agent brings, without making any special inquiry concerning its merits, and find when it is too late that they have made a serious mistake. It is a far better way to examine the different styles of machines before buying. In selecting a machine, the buyer should try to get one with as many merits and as few defects as possible. It should be as light as possible, yet possess the requisite strength, and should run easily. A heavy, clumsy machine is hard to move or to use. Light running machines are generally made on better principles than those which run extremely hard. It should also be durable. Some machines will last as long again as others which cost as much, or more. And prices are so high that it is an object to get those which will last a long time. But it is not only important to have good tools and machines, but it is also necessary to take care of them, otherwise they will remain good but a short time. The best shovels, hoes and rakes, the finest reapers and mowers, the nicest threshers in the world, if badly used, and constantly exposed to the weather, will soon become very poor. Ill usage and exposure spoils more tools and machines than are ever worn out by use. A good shed in which to keep all the farm implements, is a building which ought to be found on every farm. The farmer who has none, will find the money expended in building one invested better than it would be in government securities. It would save him from constant and heavy losses, and prevent a great deal of scolding about old machines which constantly fail when wanted for service, but for which failures the owner alone is to blame. Machines are often injured by not being properly oiled. A reaper or thresher will run very much easier if frequently oiled, and will last for a long time. But if the oiling is neglected, it will run hard and wear very fast. Oil costs but little, and should be freely used. Let no one imagine that I favor throwing away all the old tools and machines, and buying new ones to take their places. Far from it. The farmer who has good tools, even if they are old, can much better use them than to buy new ones. The same is true of machines. If they are in good order, do not run very hard, and do the work well, they should be kept a while longer. If, however, they are badly worked,

run extremely hard, and are in danger of breaking every time they are used, it will be economy on the part of their owner to lay them aside and obtain better ones to fill their places. And when buying a machine, I claim it is economy to "get the best," even though it costs a little more than one which is not as good. What I have said about the care of machines, applies alike to the new and old. No tool or machine which is fit to use, is too poor to be taken care of, and if proper care were taken of them, there would be much less trouble with all kinds of farm implements.—*Live Stock Journal*.

THE FUTURE OF THE POTATO CROP.

Will the beetle destroy the potato crop and make the growth of this important edible either impossible or greatly restricted? We give a decided *No* to both these questions, frequently asked of us personally, and almost every day suggested by the fears of our exchanges.

The potato is far too important a crop to be stamped out of existence by the beetle. Intelligent and enterprising farmers would find means of growing potatoes enough for general use were the difficulties fourfold what they are. Possibly the price of potatoes might be doubled, or even trebled, but the use of the vegetable would not be discontinued, and its production would be more profitable than ever before. Potatoes have always been too easily grown. Hence the price has been low and the farmer has not had fair pay for the hard work which handling a potato crop implies. Henceforth, by doing some additional light work in destroying potato beetles, by planting on better soil, and giving better culture, the crop will be larger, the price better, and the receipts perhaps trebled, at a slight additional cost per acre. The potato beetle will, without doubt, increase the price of potatoes somewhat, and in this the consumer must suffer; but farmers who know how to deal with the enemy can and will make more money from potatoes than ever before. The potato is henceforth transferred to the list of crops not easily grown, and therefore always most profitable. It is skill and patience which best pay in farming and not brute strength, and these are what potato culture needs. So long as it was a business that mainly employed strong arms and backs in digging and securing the crop, potato growing was not a very inviting occupation, however profitable. Now, by the perfecting of machines for planting and digging potatoes, the manual labor has been reduced 50 per cent. It is now a question of moral and intellectual qualities, and only those farmers will succeed who are able to see what is needed and have the perseverance and patience to do it. In less words, potato growing is to be in fewer hands until a larger proportion of American farmers are more thorough and successful in their business.

The potato beetle, in common with most insect enemies, will prove a blessing in disguise to American Farmers. Many of them may

not see this now, but ten or twenty years hence they will. The midge in wheat compelled farmers to prepare their ground better, to put in seed more carefully, and to manure better than ever before; and we believe the potato beetle will ultimately have as good an effect on growers of the potato. There is neither reason nor religion in despondency. Reason and experience tell us that when any insect becomes too numerous, something is sent to check it, and we are told in the Good Book that while the earth endureth, summer and winter, seed-time and harvest shall not fail.—*Rural New Yorker*.

THE STEAM PLOUGH AT WORK.

The Vicksburg *Herald* gives the following account of the working of a steam plough on the plantation of General Wade Hampton, near Skipwith's Landing, Miss. :

The apparatus consists of two portable engines, which are so made that they run themselves without the aid of horse power over any road or field. The engines are placed at opposite sides of the field, and by means of wire ropes, four hundred and three yards long, draw a gang of ploughs from one side to the other. The ploughs cut the soil to any depth required, and at a rapid rate, faster than a man can walk. There are different sets of ploughs, for deep and shallow ploughing, for subsoiling, for extracting roots, and for making cotton beds. The latter is the most interesting, and makes a complete cotton bed of over five feet wide at one operation. They plough on an average of twenty-five to thirty-five acres daily, and can do even more on loose soil. The engines are also useful for much other work. The General has a large saw-mill, which these machines take with them to the woods to cut lumber and make fencing. The heavy and broad iron wheels of the engines help to make good roads, and there is no better road in the country than the one through Hampton's Walnut Ridge plantation, five miles long. A few days ago one of these engines came down to the wharf-boat at Skipwith with six large wagons in tow. These were placed on the boat, heavily laden with lumber, and the "train" then started for home at a lively rate, crossing one of the levees. It would have taken twenty-four good mules to have pulled those loads. Another time the engine was "hitched" to a good-sized house, and moved it back from the river bank several hundred yards in about twenty minutes, as fast as the men could keep the rollers under it. It is the intention of General Hampton to make these engines haul all his cotton to the river this season when the weather is favorable.

FARMERS should remember that the warm season is the time to put flesh upon their wethers and other sheep, intended for sale. A little grain fed in pasture will be repaid fourfold. The pasture will keep up condition and the grain will lay fat. Grain is worth two prices fed in warm weather. The best time to feed grain to sheep is in October, November and December.

[For the Southern Planter and Farmer.]

AGRICULTURAL CLUBS.

I know not what better service I can render to my brother farmers, than by urging them, and, if possible, inducing them, to form agricultural clubs in *every* neighborhood, after the manner and for the purposes of many organized in this county before the war, and revived since.

A simple statement of the *modus operandi*, and the results that have followed, will constitute the strongest argument I can urge for the adoption of the plan.

I. From twelve to twenty of us meet in rotation every month at the residence of some one of the members (the place fixed at the last meeting), at 10 o'clock A. M. As soon as a quorum is present, the club is called to order by the president, and a committee of not less than three is appointed, who proceed at once, with such other members of the club as may choose to accompany them, to make a careful and minute examination of the farm, cattle, hogs, sheep, outbuildings, fencing, gates, garden, farming implements, style of cultivation, condition of the crops, &c., and thereupon to make a report in writing to the club, wherein "they nothing extenuate or set down ought in malice." The report is then open to any comment that any member may choose to make.

The benefit to be derived from this course of proceeding is obvious. The member knows before hand that his whole management will be scanned and criticised, when there is evidence of want of skill, attention and judgment, while if his farm, cattle buildings, &c., display the exercise of these qualities, he will receive a due need of praise. Now what can influence our conduct more than the desire to escape just criticism, and to obtain commendation? Then these two forces will be constantly operating on the members to "keep there households in order," knowing that soon a "chiel will be amang them and faith he'll print 'em." What a spur this is in the sides of the member to give proper care and attention to the farm and everything go on at *proper* time, and thus consult economy and profit, knowing by practical experience that "a stitch in time saves nine," and abandoning the too usual custom of "putting off till to-morrow, what should be done to-day."

But you will inquire, have these visitations of the club worked this revolution of management and products in the case of any of your members? I answer, yes. I will confine myself to the specification of one of the cases, without giving name.

More than eighteen months ago, for the first time, the club met at his house, he is a farmer on a pretty good scale for our region, with some 1500 acres of land, and some fifteen or twenty horses, mules and colts, &c., &c., and other things corresponding, a man of intelligence and highest worth, but who, engaged in other matters, left the farm mainly to others' management. When the committee read their report, I really sympathized with what I knew must be his mortification under such an excoriating report—stock quite numerous—of cattle, sheep, hogs all in bad order, and showing want of proper care and attention; crops of all kinds, indifferently and badly cultivated, stable and grounds around in very bad order, &c., &c. At the conclusion of the report he very quietly remarked, he reckoned that it was a just and candid one; and that now that the disease was known, he would look out for remedies for a cure.

Well, a little more than twelve months after, in regular routine, the club again met at his house.

I was one of the committee to examine and report. We went over the farm and examined stock, crops, &c., &c. Remembering our last visit, we were no little surprised *voila tout est change*; everything is changed, the crops in fine order, wheat, oats, corn, all, and a good crop; sheep, cattle, horses and hogs, all, in fine condition; pasturage good; barn, stable and barn yard, all showing admirable care for the accommodation and comfort of stock; fencing, outbuildings, &c., &c., all right; garden ditto.

I carried the report into the parlor, after reading it to the club, and read it to his family, when they exclaimed, how gratified we are, for father was much annoyed by your last report, he has frequently referred to it, and told us he would see what could be done by the time of your next visitation, and we are as much pleased as we know he is, at his having succeeded so well. It is as true in agriculture as in politics, that vigilance and care are as much the price we have to pay for success in the former as for liberty in the latter. And this reference to the importance of our consciousness, that our work has to undergo the examination and criticism of others, reminds me of the conduct of a very intelligent and successful farmer of our county, Col. Lindsay, now dead—conduct, which, at first blush, may seem injudicious, but my own experience and observation has impressed me as eminently wise. At a very advanced age, he was taken sick, and being satisfied that it would prove a lingering “sickness unto death,” he sent for his son-in-law, and requested him to go and settle with his overseer and discharge him. He remonstrated with him, saying, “why, father, you always had an overseer when you were in health and was able to ride over your farm yourself and see that its affairs were properly managed, and now when you cannot do so, how can you dispense with your overseer?” “Ah! my son,” said he, “I have lived long enough to learn that an overseer is a very useful auxiliary, when he has somebody to supervise him, but if he has not, he is worse than none; I would rather trust to the servants who do feel some interest in me and my concerns, than to a hired employee, who no longer feels any sense of responsibility and no interest save in his wages, and having as good a time as possible.” And it is equally true with us proprietors of farms, our care and attention are much stimulated by the consciousness that our entire management is periodically to be scanned, criticised and remarked upon. This report, too, is required to be copied by the Secretary of the club and sent to the County Association (of which I will say something presently) for the inspection of members of other clubs of the county.

II. Our next order of business is, for the members *seriatim* to present their views on the subject selected for discussion, which subject is always chosen at the preceding monthly meeting, so that members may have time to consider and reflect upon it, and give their views considerably and advisedly—such questions as the following: “The proper time for sowing clover seed, and should they be covered in any way, and if so how?” or any other of the thousand questions interesting to the practical farmer. By this means, the information and the experience of all the members are thrown into the common stock and made the special property of each individual member.

III. Next, special experiments are assigned to different members, who are to try them, and make report of the result in due time to the club, for example: "to apply lime, mineral and oyster-shells separately to land, grey and red, in different qualities, varying from ten to fifty bushels to the acre, and report the results, on say, turnips, wheat, and the grasses after it.

IV.—After disposing of these subjects, if there is time, it is competent for any member to present any matter on which he may desire the views of the Club, for his instruction and guidance, and it is considered accordingly.

Now, that the proceedings may be properly and profitably conducted, it is important that you have the proper man for your presiding officer one intelligent and firm, who will hold the members to the subject to be considered, and see to it that each one acts well the part assigned. We are fortunate in having had one for several years, well known throughout the State, for his intimate scientific, as well as practical acquaintance with all the branches of agriculture, Col. T. J. Randolph, who, though at a very advanced age, yet has as much life, energy and buoyancy, and feels as deep an interest in all that concerns the welfare and prosperity, and honor of the old Commonwealth as any young man of twenty-two.

Now can any one doubt, that great good will result to any neighborhood, where such a Club is formed—in the increased interest that will be taken in farming, increased care and attention, and superior management, and the necessary resultant—better crops—and to show how important care, attention, skill and wise management are, and how they tell on products and profits, I will give the result of two crops of tobacco made in this county by two friends of mine. It so happened that each planted 21 acres in the same range of country, on the Eastern slope of our South-western mountains. The one possessed of skill and judgment in the management of the weed, and exercising care, diligence and attention, and always doing the right thing at the right time. From his 21 acres he raised 19,000 pounds and sold at an average of \$17.25 per hundred. The other, equally intelligent on general subjects, but with little special knowledge of the cultivation of tobacco, entrusted its entire culture and management to others. He raised 9,400 pounds and sold at an average of less than nine dollars.

And thus it is in all departments of business. Nothing good or valuable is attained without pains, care, labor and good management. "As we sow so shall we reap."

And is there not everything to animate and encourage the Virginia farmers. Abundance of lands, fertile and productive, or capable of being made so, by proper care and management; adapted to every variety of fruits and other products needed by man or beast; pure and healthy air, and water for transportation; and above all, with a people, who, for intelligence and worth, and all virtues that ennoble our race, have a reputation unsurpassed by any state in the Union.

"Let us, then, be up and doing,
With a heart for any fate,
Still achieving, still pursuing,"

And the best results cannot fail to crown our efforts.

Farmers of Virginia, realize your high and honorable position. You

are the owners, the lords of the soil, to you Virginia belongs; all others depend upon the cultivation of the soil for subsistence. Remember there are some 80,000 proprietors of farms here in this good old State, with some 250 or 300,000 others engaged as our employees on them—exceeding by some five to one the number engaged here in all other pursuits. What can we not do if we set to work with a will? We have too long looked for foreign aid in the way of immigrants, with their capital, to buy portions of our lands and to start our factories. They don't come in sufficient numbers and amounts to make their presence felt. Let us wait for them no longer, but look to our own labor and skill, and judgment, and economy, and by our own strong arms, with the blessing of that Providence who always helps those who help themselves, we will work out our own deliverance and again see our beloved State rise Anteus like from her late prostration with renewed life and vigor.

I omitted to mention in proper order that we have also a county association, composed of the several local clubs, who meet every two months at our county seat. This association is formed for the purpose of securing concert and co-operation, and a kind of union of all the farmers of the county—and then to bring about like concert and co-operation throughout the State, we send delegates to the Farmers' Council, composed of delegates from all parts of the State, holding an annual meeting in Petersburg.

We take no position of antagonism with the Patrons of Husbandry. So far as we understand their objects, we can act in harmony together. We are told they mainly direct their efforts to cheapening the arts of transportation, and the prices of fertilizers, agricultural machinery, charges of middlemen, &c.; in all of which we have a common interest, while we begin at the foundation, and strive to make every particular farmer produce "two blades of grass where now only one grows"—pursuing a plan of action which operates for good upon every individual farmer and farm, so that there is no danger of collision by crossing each others orbits, but one may be considered as supplementing the other.

B. H. MAGRUDER.

[For the Southern Planter and Farmer.]

GOV. SMITH ON COMPLETE MANURES.

Having sent you a copy of my letter to Professor Mallet of the 9th March last, and also of his reply of the 16th of the same month, which appeared in the April number, it was my intention to follow with another, having the same object in view; but the press upon my time, coupled with the fact that I am my own overseer and manager, delayed me, and even now I am so hurried that I cannot do it justice, were I fully competent to do so.

In my letter to Professor Mallet, my aims were to awaken the agricultural public to the importance of acquiring a thorough knowledge of a few elementary principles, absolutely essential to successful farming, and to show, by the highest authority, that this essential knowledge was restricted to a very narrow field of enquiry, entirely within the capacity of any intelligent farmer. In the brief space

of time at my command I shall follow up this purpose, not so much to instruct others, for I am myself a student, as to excite enquiry.

I suppose I may say, that it is *settled* that the whole animal and vegetable world consists of but fourteen materials, to wit: carbon, nitrogen or azote, hydrogen and oxygen, which are called "the organic elements," because they are found in every living thing, animal or vegetable; and phosphorus, sulphur, chlorine, silicium, iron, manganese, calcium, magnesia, sodium and potassium, which are called "the mineral elements," because they belong to the solid crust of the earth.

Now, from these materials comes the wheaten loaf, the staff of life, and the poison which destroys it. They are charmingly termed by the celebrated Ville, *the Alphabet of the Language of Nature*. Public instruction aims to teach all our people the alphabet of our own language, it surely can be hardly less important it should teach us this.

But the weight of authority establishes that *ten* of these fourteen materials are found in sufficient abundance in all soils, so that we have only to provide four of them, to wit: nitrogen, or as it is frequently termed azote, potassa, phosphate of lime, and lime, which, if applied in sufficient quantities, will surely, with thorough preparation of the land, and timely seeding, secure an abundant crop. Nitrogen is produced by any decaying substances, whether of an animal or vegetable character. Potassa, the ash element—every fire we make to cook a meal produces it—should be preserved for farm use, and not for the housewife, as she can make her soap with soda, a cheaper article. Phosphate of lime is ordinarily understood to be made of animal bone, broken up fine or ground, and made soluble by sulphuric acid, or by a proper application of unleached ashes, or by composting it with fresh horse dung, or by atmospheric and other agencies; the latter, however, is a slow process. And lime, with which we all feel acquainted, but which we must nevertheless use in compost with intelligent caution—indeed, as a composting element, it should give way to sulphate of lime, (plaster).

Having satisfied ourselves as to the fertilizers we should use, we must next satisfy ourselves as to the quantity we should apply per acre. We must not forget that the last 200 or 300 pounds of fertilizer is the paying portion of the investment. Taxes, interest, labor and seed are the same whether you make ten bushels or forty per acre. Two or three hundred pounds of fertilizer may or may not secure ten or twelve bushels of wheat per acre, (*which does not pay*.) and a good set of grass, but a feed of fertilizer fully up to the wants of the growing crop, is certain of a paying return, and a strong and satisfactory set of grass. How much then of the four fertilizers to which I have referred, should be applied per acre. This depends upon the thoroughness of the preparation of the field to be sown, its present fertility, and the time of seeding.

I hold that no field is thoroughly prepared as a seed-bed, unless

broken up at least eight inches deep, harrowed, rolled, re-plowed, re-harrowed, and when the crop is sown, rolled again. The advantages are, that, with such a preparation you will have no winter killing in your crop, nor weeds, nor foreign grasses to embarrass its vigorous growth. Again, the crop must have some weeks for fall growth, that it may meet the winter in vigorous development, with a strong, broad leaf, &c. The broader the leaf the more carbonic acid it draws from the atmosphere in which it abounds, and the greater the certainty of a fine crop at harvest time. These advantages will justify the farmer in materially diminishing the quantity of fertilizer, with which he should otherwise dress his crop. Again, he should know well the existing fertility of his field. Has he been experimenting with a view to inform himself? Should he have ascertained that his field has a plenty of nitrogen, but wants potash, and has lime, yet wants phosphate of lime, he will only purchase the articles in which it is deficient, and so save himself from the use of those with which it is already sufficiently supplied. But should the field be poor, that is, without the food necessary to the production of a paying crop, it must be supplied or the attempt to raise a crop should be abandoned. Ville, after many years of trial and experiment, adopted the following formula, which he denominated "a complete manure," because its proper application to the field invariably produced a remunerative crop. Its composition is as follows:

The complete manure for which No. 1

Acid Phosphate of Lime, 355 lbs.	Cost in France, \$5.40	In U. States, \$6.11
Nitrate of Potash. 177 "	" " 10.47	" " 15.93
Sulphate of Ammonia. 222 "	" " 9.50	" " 11.10
Sulphate of Lime, 312 "	" " .59	" " 1.01
1066	\$25.96	\$34.15

This dose to an acre of land, which, like the worn out land of this part of Virginia produced a most satisfactory crop. See Miss Howard's translation of Ville, page 36 as follows:

The above Complete Fertilizers gave a crop of	56.44 bushels of wheat.
" " without lime.	53.33 " "
" " " potash.	40.44 " "
" " " phosphate.	34.66 " "
" " " azotic matter	18.88 " "
Without any fertilizer,	15.88

While this experiment at Vincennes, France, shows that all the ingredients of the fertilizer were necessary to a full crop, yet it also shows that the land was more deficient in azote or nitrogen.

It will not escape attention that the cost of Ville's Complete Fertilizer is materially more in this country than in France. But the cost can be greatly reduced with us.

One of the most considerable items of expense with us, in the composition of the "complete fertilizer," is the potash, costing nine cents a pound. But the 177 pounds of potash may be substituted by

328 pounds of sulphate of potash, containing 54 per cent. of actual potash, which can be bought in New York at $2\frac{3}{4}$ cents a pound; thus reducing materially the aggregate cost. The sulphate of ammonia may give place to Peruvian guano, or to nitrate of soda, or to dried or ground bone and meat preparation, either of which will supply the requisite azote or nitrogen, as well as the sulphate of ammonia; and I think for a less price. The phosphate for which I have estimated at \$35 a ton, is the South Carolina article known to me to be prime, and said by the great English farmer and chemist, Lawes, to be the best in the world, and which, he says, ought to be furnished to us at \$20 a ton. So that we may expect soon, and, if not otherwise, through the Grange, to get "Ville's Complete Fertilizer" as cheaply at least as it is supplied to the farmers in France.

I have thus thrown together these hasty views and forward them to you by way of reply to your card, with the privilege to dispose of them at your discretion.

In great haste, yours truly,

WM. SMITH.

N. B.—I was honored by Miss Howard, of Georgia, with a copy of her most admirable and intelligible translation of Ville's Celebrated Lectures and Appendix. As far as I can judge, it is infinitely superior to the Boston translation of the same work. I earnestly commend it to the agricultural public.

W. S.

Warrenton, Va., July 17, 1875.

[We understand that Gov. Smith has been experimenting with fertilizers. We hope he will send us the results.—ED.]

[For the Southern Planter and Farmer.]

FERTILIZERS.

I have had it in my mind for some time to give you an article on fertilizers. My mind was called to the subject by an article in your February number, written by "Keaster," on the bad effects of fertilizers.

From the first introduction of Peruvian guano into this country there have been many advocates for the stimulant theory, as it is called, which supposes that all those articles of manure that make Peruvian guano a basis of preparation are mere stimulants, just as brandy is to the human system. I am greatly astonished that any one who has the least pretension to a knowledge of the teachings of science should for one moment countenance such a wild and erroneous theory—one so well calculated to do injury to the farming interests. Whilst I am an advocate for home production of every thing that can be produced, especially of every atom of manure that can be made or saved, I hold it as an axiom, that all you can do with a farm, by its own production, is to keep it to its then condition of fertility, and in order to this, every atom of material taken from

the soil must be returned in some form; for it is a fact beyond dispute, that every growing crop extracts from the soil an amount of fertilizing material equal to its own weight. How, then, can you make rich, by its own resources, any exhausted highland farm? I will admit, that if you have a large proportion of rich bottom lands, kept so by overflowing, you may enrich your uplands by taking from these and applying to them. But my point is, take the ordinary farms in this Piedmont region, and you cannot enrich them without foreign material.

Then take it for granted you must have help. What shall it be?

I hold that Peruvian guano, as a basis, is the best, and those articles that are nearest to it next best.

But these theorists say, it is a mere stimulant, it will ruin your land. Mr. Editor, I would just as soon say good fat meat would ruin the laborer; one is about as much a stimulant as the other; as one brings strength and nerve to the laborer, so does the other bring strength and vigor to the soil.

To prove this is easy: 1st. What are the elements necessary to compose a rich soil? Silica and silicious sands, alumina, oxide iron, oxide manganese, lime, magnesia, potash, soda, phosphoric acid, sulphuric acid, carbonic acid, chlorine and humus. These, in a greater or less degree compose all fertile soils, and are in various combinations with the primary elements, and in combinations one with another, such as the silicate of lime, magnesia, &c. Now, unless these elements are contained in the soil in some suitable quantity, you need not expect a full yield, however well you may till the ground, or however good the season.

What elements compose Peruvian guano? Analyses made by many of the most distinguished chemists agree as to the ingredients contained in it. These are urate of ammonia, oxalate ammonia, oxalate lime, phosphate ammonia, phosphate magnesia and ammonia, phosphate lime, sulphate potash, sulphate soda, and sal ammoniac. Now compare this with stable or horse manure, and you have almost the same, with the exception of the vegetable matter mixed with it.

Here lies the difficulty, Mr. Editor. These would-be theorists sow down guano on the land, then cultivate three or four crops without rest, until all the vegetable matter in the soil is exhausted (without this no soil can or will produce), and then say the guano exhausted it. But, if the better plan of rest, with clover, were pursued, there would be an entirely different conclusion.

My argument is in such a condensed form that the casual reader will not see its real import.

I might add, that my experience with fertilizers fully confirms the view I have taken, having made rich a small farm by following this reasoning.

I am now making some experiments with a sample of Piedmont guano presented me by my friend Col. Wait, of Virginia, which I will report to you.

L. B. S.

Winston's, N. C.

[For the Southern Planter and Farmer.]

A LETTER FROM HALIFAX.

Your readers wish something original, and something fresh; and I, like a certain gentleman I have heard of, am afraid there is nothing original about me excepting *original sin*. "Does Farming Pay?" has long been discussed; "The Labor Question" long since decided, and we have written appeal after appeal to our Legislature to give us relief upon "The Dog Question," and to secure us upon the "Fence Law" question. As to the dog question, the people must take the law in their own hands, and raise sheep whether or no; and as to the fence-law question, it is simply impossible for that ever to be changed in this county. The people, white and colored, have no fences, and it would take at least a fourth of what little wood land they have to fence in—besides, they haven't the means or time to spare from their crops. The majority are satisfied of the fairness and the benefit arising from the present law, but under the pressure of the present hard times it will be impossible to change it. It is absurd that Virginia, struggling under her embarrassments and trying to pay off her indebtedness, cannot have the benefit of a tax that would accrue from taxing the numberless horde of dogs that roam from place to place seeking what they may devour—infesting every log-cabin, every field, every street, every store, house, sheepfold, or brick yard—doing damage wherever they go, besides preventing a revenue to the State by keeping down the sheep interest. But aint the Grangers going to arrange all these matters for our farmers? We look to the Grangers. We have long *begged* for our rights—let us now in *solid column demand* them! "In union there is strength!" This is the colored man's secret. Let them agree on any measure, and they are *one* for that measure. Let us take a lesson. Let us but *unite*, let us resolve to put our hands to the plow, to have more confidence in each other, and to make our old mother State the "State of States" she used to be.

Some writer complains of "The Loneliness of American Farm Life." We work about thirty hands in the brick yards of the Messrs. Cosby, Owen & Co., at South Boston and Wolf Trap depots, and I assure you before Saturday comes I often wish I could know something of the loneliness of farm life. We long to get out of the rabble, the noisy, business crowd, and to feel something of the quiet serenity, the almost perfect peace, that dwells under the roof of that little farm house that is by the wayside. Even my horse, as he turns in at the gate, seems to know that in there is quiet, and that in there the jarring, and bustling, and jolting discord ceases.

Of course our farmers, if they have time, should visit each other more, and should be more sociable; but how can any one be lonesome on a farm? Why, there we can have the sweet flowers and the glorious fields of grain for our companions, if we have been industrious enough to deserve them; and then we have the wild flowers, the woods, the fields, the brooks, &c., free to us, ramble where we may. How can we complain? Let us only make our homes more attractive; let us only interest ourselves in them, and we shall not have to complain of loneliness.

What more enticing or beneficial to health than to rise with the lark, draw in the fresh, pure air of heaven, see the glorious sun rise, our fields clothed in fresh beauty, administer to the wants of our animals and receive their almost human gratitude, take a walk amongst our garden of promising vegetables, and then to be called to a breakfast of fried chicken, ham, eggs, biscuit, and ice-cool butter and milk, all of our own raising and industry! Who could refuse to relish such a breakfast, especially if presided over by a little girl with rosy cheeks and cherry-red lips? And who, after partaking of such, could refuse to go to his work in the growing fields with ready hands and a thankful, joyful heart? He can work in the cool of the day, and with his newspaper rest in the shade. And in the fall, when rest is needed and deserved, when old winter is coming on, our crops, &c., all secured, and everything in its place, and a place for everything, then we can take our families down to our old mother State Fair, procure our winter supplies, &c. But a farmer may enjoy numberless blessings which I cannot enumerate here. May the time soon be when a farmer knows how to appreciate his many blessings.

Pardon me for this long, disconnected, disjointed and tedious harangue, written amid many interruptions, and I will try and do better next time.

H. W. COSBY.

[For the Southern Planter and Farmer.]

PEA GATHERING.

I observe that some of your readers wish to know the cheapest mode of gathering peas. I will give you my plan, but don't say it is the best that can be devised, but it is one that pays. Your correspondent objects to the pea on the ground that it does not mature its seed simultaneously, which is well founded, provided they could only be gathered by hand, but such is not the case. Gathering peas by hand for feeding purposes was necessarily abandoned when the institution of slavery was abolished. We can afford to gather in small quantities by hand for planting, but not for feeding purposes. A cheaper way of gathering for seed is to pull or cut vines and all, and thrash or tramp out, which will leave a pretty fair article for forage. Gathering by hand would make the pea one of the most expensive crops we grow.

If your correspondent will plant corn and peas as suggested in a previous article, and feed off peas with hogs, beef cattle, (in fact all kinds of stock may run in pea fields and get fat or in good condition for the winter,) he will find that his farm will not require more than two-thirds the amount of corn that is usually consumed. All practical farmers know that poor animals when fed on corn at the market price in the South will eat their heads off (or so nearly so that there will be little left to balance expense of raising) by the time it is prepared for the tub; and this is the great bug bear that scares many farmers off the road that leads to prosperity and independence. If our people could be induced to plant and sow peas in the right way and at the proper time, a sufficient amount of pork, beef and butter could be produced to supply our wants at a nominal cost. My pork cost me 3 cents per pound in 1873, and not exceeding $3\frac{1}{2}$ cents in 1874, (these figures may appear very small to some but they are in excess, if anything, of the real amount,) which could only have been done in this country by pursuing the plan named above.

Now, farmers, which is it better for us to produce, our pork at a trifling cost or give liens on our crops, and pay from 15 to 25 cents per pound for bacon and all other supplies in the same proportions.

I, for one, have resolved to try to live at home as much as possible, let others do as they may; still it would be very gratifying to me to see my brother farmers enjoying the peace, prosperity and independence consequent upon a full corn-crib, smoke-house, flour-house, barn, &c., &c. J.

Unionville, S. C.

[For the Southern Planter and Farmer.]

"COTTON IS KING."

Cotton was proclaimed king about the year 1854, I think, though really it reigned virtually farther back. That cotton is king, and an exceedingly fickle and capricious monarch, I am ready to concede, and of his potency, his tyranny, no one need doubt. He fattens and pampers thousands of his subjects, whilst he oppresses and tyrannizes over many other more deserving and fully as loyal. This potentate enriches those mainly who idolize him most, be they noble or ignoble, honest or thieves. We see the railroad magnates in solemn conclave over their sovereign's business, and we see the dirty drayman all eager to serve his master—both fatten. The warehouse men, they begin to smile about the first of September when their master expects to pay them his annual visit, and they too begin to think of oysters and canvass-backs. The fire insurance man sits in his dusty office and smiles at the coming harvest, and contemplates immediate deliverance from cobwebs and dust, and that long torpid state in which, by necessity, he has lain. The importer of bagging and ties, (a grand monopoly), he too prepares to sing peans to this monarch of the civilized world. The mercantile marine is now ready

to crowd their white wings into every one of his majestic ports, and the fat old ship-owner, as hesits in his old oaken chair in Liverpool or Boston, shakes his ponderous sides as he contemplates the good time ahead. The factor, bless the factor, I would not forget him—he now begins to put on new life, and begins to organize his forces, his draymen, his storage-men, his weigh-men, his marking-men, his samplers, his menders, his salesmen, his book keepers, errand boys and porters. He rubs his hands in very glee at the harvest of drayage, storage, hand-hire, weighing, insurance, city tax, *pickage*, commissions, &c., &c., and lays out plans for a fine, new residence to be built and furnished, and the *turn out* for the young ladies—it all comes looming up before him in beautiful expectation, and he raises hosannahs to the king and shouts, great is cotton the king. The spinners, dear souls, they are in great perplexity. They wish to shout to the great chorus, but these “strikes,” and then there is general stagnation, but some how, they always manage to make good dividends.

All these, and thousands not thought of, live, thrive, fatten upon this great staple (to drop the allegory) cotton, and only he who produces it, he that toils night and day the year round to bring forth this vast treasure, reaps nothing but loss.

The question is, why is this?

It can be answered in a few words.

Too much cotton and too little corn.

Too much land and too little manure.

Too shallow breaking, and too deep culture.

The first step to prosperity is to get out of debt, and that cannot be done unless we stop this everlasting peace destroying process of credit. When we make plenty of corn and meat at home, (and we can do it easily) then we get clear of debt, and when we get out of debt, this grand army of “middle-men” will have to look for other pastures.

Virginia will soon be ranked a cotton State, but let me here warn that people never to permit cotton to get such a hold on them as upon us, to cause them to locate their cribs and smokehouses in the West instead of on their own premises. Let cotton (yes, and tobacco, too,) be the *dessert*—it is not the staff of life—corn, wheat, oats, peas, potatoes, and all things for man and beast, are the *ham and cabbage* (that good old Virginia dish), and roast-beef and turkey. Cotton is ice-cream, syllabub and floating island. Yet what would the millions do without it? It suppresses mobs in old England and New England. It gives bread to thousands who could get it by nothing else. It creates a circulating medium for the civilized world. It brings into play more commercial talent than any other article of production known to man. It has a mighty influence in the destiny of nations—in fact, King Cotton is the most powerful monarch that has ever reigned in this earth, and we Southern planters have it in our power to bring him at our feet and monarch him and all his votaries by a judicious and patient course, and that in two years from date.

I find from sad experience that a large area of cotton and many laborers will not pay. I am now paying off a large debt accumulated for several consecutive years by cultivating a thousand acres annually, with less than one fourth of that quantity of land. One may naturally ask, if one plow makes five hundred dollars clear money a year, why will not twenty plows make ten thousand? In the first place, no one man can give that attention to fifty hands that is absolutely necessary to make it a success; and to have overseers is only to add to your losses and aggravations. I have tried it effectually. And then the crop is too precarious to risk such large expenditure. The labor, too, is too vacillating to hazard so great an outlay.

A neighbor of mine has at this time six hundred acres in cotton, and it is fine, and he expects two hundred and seventy-five bales; he is an energetic, intelligent gentleman, has a good manager, and yet he tells me, even at last year's prices, and realizing the crop as stated above, he will lose money.

Among the thoughtful and intelligent planters, this seems to be the course hereafter: Rent all they can to such tenants as can support themselves—making it binding on them to manure, keep up fences and rotate—and to hire a few of the best laborers for a small farm, and make that rich. Then, by making every year enough corn to last eighteen months, hogs, cattle, and sheep can be produced, thereby rendering ourselves independent of the West.

As to the cultivation of cotton, every man has his own theory. My *experience* tells me to break up my land deep, prepare it well, manure heavily, either in the drill or broadcast, keep it clear of grass, and the result will be satisfactory. Land that will produce ten bushels of corn to the acre will bear cotton rows as close as three feet three inches—poorer the land the closer the bed, especially with the improved seed. "Cotton loves company," and the seed I use, of my own improving, requires not over three feet apart in ordinary land; and in such land I have not failed to make a bale to a bale and a half to the acre for the last five years. My land is stiff, consequently I bar it, chop it out, put the dirt back in a day or two to protect the young plant, and after that I use the sweeps; but if you let the grass get the start of you the sweep must be dispensed with and the "buzzard" taken up. I keep the sweep going until I begin to pick. I think it best—others differ. Cotton should always follow corn or other grain. In October and November a good picker, man or woman, ought to pick on an average two hundred pounds. I have two old women who have picked as high as five hundred pounds each per day. One of them can do it now. Crops can be and ought to be gathered and ginned up by the middle of December. Cotton picked after that is hardly worth the picking. Good gins add to the value of the staple, and a good intelligent ginner is indispensable. Tallow packed in the gudgeons prevents heating—oil should never be used except a little when the gin is first

started. Matches should never be allowed in the field when picking. A good, strong, glass lantern about the gin-house, *in careful hands*, is also indispensable. "Whang" leather for strings, and a punch must always be at hand—also a hatchet. Nails or bits of iron should never be allowed about the cotton or gin-house. A nail or stone passing through the saws will set the lint-room on fire. These little directions may be of service to some new beginners. Old cotton planters are set in their ways, and allow no innovations on former usages—to such I do not address myself.

You have my views (at your request) Mr. Editor, hastily thrown together, and if they are worth anything, you and the public are welcome to them. I will say in conclusion, that cotton, though the most fascinating of all products, because of its portability, and its adaptability to mankind, yet it is a dangerous article financially and otherwise, unless sensibly and judiciously handled.

Allington, Burke county, Ga.

S. WYATT.

[For the Southern Planter and Farmer.]

WASTE.

In mechanical parlance waste is the tangled and useless residue of thread from the spindles in cotton mills, used to clean and wipe the black and gummy oil from machinery, until recently this material, used by the handful, when it became saturated with oil and filth, was thrown away. One of our leading railroad managers conceived the idea of saving it by washing, and thus from handfuls of waste, accomplished a saving of over eight thousand dollars per year for the company.

No occupation is more prodigal of opportunities for wastefulness than that of farming, and no one needs more to watch and save than the farmer, in every possible and conceivable way, and especially in the important item of manure supply from which to draw nourishment for his crops.

It has been stated by Boussingault, and endorsed by Liebig, that the liquid and solid excrement of one man, will yield in a year over sixteen and a quarter pounds of nitrogen, or an amount equal to that contained in 800 pounds of wheat, more than would be necessarily added to that obtainable from the atmosphere to thoroughly fertilize an acre of ground.

It has been established after repeated experiments, by equally eminent authority as cited above, that humus does not, as a fertilizer, furnish plant life with carbon by being absorbed at once, or to any appreciable extent by vegetation, but by presenting a slow and lasting source of carbonic acid, which is absorbed by the roots, principally at a time when the young plant destitute of leaves, gets the least sustenance from the atmosphere; if this can be accomplished or followed by the volatilization of ammonia, we have the main sources of the life of most plants. Notwithstanding, as is practiced by almost

all farmers, we increase the humus in our lands by the application of straw, pine-tags, wood trash, and other vegetable and carbonaceous matters, all-be-it that they are in a measure combined with some animal excrement. Our lands with all the literary efforts of good theoretical and practical farmers in their behalf in writing up manures, are in the main, fast: all, to a greater or less extent losing those of their constituents that go to the production of the seeds, roots, and leaves of the plants raised upon them, gathered from them, and taken away to sustain our communities of non-producers, who consume and never return any compensating nourishment for a repetition of the production of the soil. In short, with our present system of city sewage, the city is constantly sustained at the expense of the country.

This has all been talked over, written about, and lectured upon many times, and too much, before, by farmers and others.

It is suggested here, that perhaps farmers could do more by example to lecture city consumers into saving for them, if they would first investigate the probability of a beam in their own optic, before they scan too closely the keen business eye of their city neighbor.

Probably, not upon one farm in a hundred is there any notice taken of the source of manure supply, in a family of four persons, perhaps upon one farm in fifty, once in a long time. The edifice set over a cess-pool near the house, and in close contiguity to the well, is tipped over upon its side, upon a day selected when the wind is blowing from the house. all hands with noses stuffed with cotton are engaged in a long dreaded and a most disgusting job of cleaning out a mass of putridity, to be hauled off, and dumped in some gully or put on some abandoned field, or used "because manure was scarce that spring and it wanted cleaning out any how." Or worse, the edifice is removed, the cess-pool filled up, another one dug near by, and the building reared over it; the putrid mass just covered to be left to continue to sweep through the soil, and in some cases to contaminate even unto the dissemination of disease and death the very spring from which the family daily drink.

So long as farmers indulge in this custom at home, it will be in vain that any reform shall be attempted in the sewage system of our cities.

If the farmers will reform their own system of sewage, and let the metropolitan money hunters see that there is a cash value to their waste, be it ever so little, and there will not be a want long for some keen eyed financier to sound the tocsin of "There's millions in it!" and "presto!" we shall have plenty of helpers, over head and ears in cheap manure, that will feed our hungry lands, and take the place of the exorbitant priced imported and manufactured compounds of (in many cases) questionable value or efficacy.

The excrement of one individual adult, solid and liquid, will average from actual experiments, over a pound and a quarter per day, for a family of four persons, over five pounds, a ton a year; this in

the state that it is voided is largely composed of water, but water holding in solution, so to speak, the very essence of plant life; could all of this be saved, there would be but an inappreciable amount of waste, but what would be appropriated by the soil and vegetation to the benefit of the farmer.

The smell is offensive! and to the taste of the delicate and fastidious, the idea of using it is repugnant, granted in its present form; yes. What shall we do with it? bury it? exactly, the idea is suggestive, bury it under the dry earth mould, that is in humus; this has been done for ages, and is the customary way of disposing of all decaying and putrid substances.

Therefore, if to dispose of this ton of excrement by burying it, we reduce the burying process to a daily system, we have the very reform for the farmer that it is the object of this paper to advocate; to be definite, the earth closet on the farm is the desideratum, and should be the rule, and not the exception. Fence corners, behind bushes, out of the way waste places inaccessible for cultivation, should be abolished as places of deposits for valuable compounds.

Upon every farm a proper and convenient place should be provided, and every member of every family, young, old, master and hireling, should be influenced, or compelled to use it regularly as a measure of health, always as a means of saving, and to respect it as a comfort and convenience, not only to the individual, but to the community around them.

It has been suggested that an idea that earth closets are a patented and expensive luxury, prevents their general use, quite the contrary. A system of daily burial of the excrement of a farmer's family can be inaugurated with no outlay of money, and but little expense of labor or time.

The usual cheap outhouse is necessary, with but little difference in manner of construction, viz: the building should be raised about sixteen or twenty inches, with two steps from the ground, to mount into it, the seat should be just high enough to admit of placing an ordinary barrel under it, it should be made wider than ordinary, to allow the barrel to be pushed well forward so that the opening may be over the centre of the mouth of it, in order that it may catch all the liquid excrement, and not allow any drip on the outside to create unpleasant smell. A box or tub, with a scoop or hand shovel should be provided, and placed at hand, (on the seat at the side, or on the floor behind the door are convenient places,) this should be kept supplied with rotten wood, dry mould or humus.

All persons using the privy should be instructed to throw a scoop full or two of the contents of the box in the barrel, both before and after occupying the seat; before, because the previous occupant may have been neglectful, and too, to prepare a dry surface to receive the fœces, and after to cover them and absorb all moisture, and prevent any unpleasant effluvia from rising, &c., &c.

When the barrels are filled, they can be removed from the back of

the house where a door or opening should have been left for the purpose, and their contents emptied in a bin or in a pile under shelter, if there is any unpleasant smell or moisture perceptible upon emptying the barrels, dry earth should be thrown on to cover and absorb it, as there should be afterward, if moisture appears upon the surface of the pile.

It will not be long before the system will work smoothly, especially if one person takes interest sufficient to devote half an hour per week to see that a supply of deodorizing material is kept on hand, and there will be no difficulty in keeping up the practice. The results at the expiration of the year, will be for every four persons, at least two tons of as good, if not superior manure, to the many high flavored, loudly lauded compounds that are sold from \$30 to \$70 per ton.

It may seem difficult to keep up a supply of dry deodorizing material during winter and prolonged wet weather.

It would not take a half day upon most farms during the dry days of summer, to collect and haul from the log-beds in the woods, fifteen or twenty barrels of fine, dry, rotten oak wood, nor would it take long to burn a coal-pit; besides the charcoal would more than pay the expense. The calcined clay from the top of the kiln, and the coal dust from the bottom, or the rotten oak from the wood, stored, and kept dry, are all excellent for the purpose, as disinfectants and absorbents, but special labor and expense seemed to be involved in obtaining a supply of either, to avoid which is most desirable in advocating a trial of any new system.

If in obtaining the usual supply wood for the families a constant practice is cultivated of picking up the decaying branches, cutting up and saving old logs and laps, and hauling the wood up, with as much of the adherent decaying matter as is possible, the trash pile from the wood if it is sheltered and kept dry (which will be a benefit to it) will furnish an abundant supply of the deodorizer needed.

A simple slatted screen (as for sifting sand) provided, and five minutes a day used in screening the fine humus from the coarse chips and trash, the supply will be constantly augmented, and the expense and trouble not noticed, except to be repaid by the improved condition and appearance of the wood land, that will be gratifying at least to the cattle, that will find good accessible browsing in place of jungles of brush, and tangles of logs and laps.

In the use of the earth closet the application of the deodorizer should be liberal, and in quantity, so that neither to the sense of touch or smell, can any trace of the fœces be perceived. If in trying the experiment you have produced such an inoffensive mass of material, that you doubt its efficacy as a manure, add but a moiety of good unleached ashes, or lime to it, and you will find that your nose knows better, apply it to your growing plants they will know what to do with it.

Sulphate of lime (plaster) may be used with the greatest advan-

tage, where money is at hand to buy deodorizers for the earth closet, as is shown by the practice of scattering it in our stables to prevent the waste of ammonia. The ammonia enters into combination "with the sulphuric acid, and the carbonic acid with the lime, forming compounds that are not volatile, and hence destitute of all smell, the ammonia being retained in a condition serviceable as manure."

To encourage the trial of this system, that its savings may be added to those from the cow-yard and horse-stable, let the *fact* be considered, that the nitrogen contained in 100 parts of human urine, is equal to 1300 parts of the fresh dung of the horse, or 600 parts of those of the cow.

S. D. HOWARD.

Shady Spring Farm.

[For the Southern Planter and Farmer.]

CURING BRIGHT TOBACCO.

Upon second consideration I have concluded to remodel my communication, published in the *Planter and Farmer* on curing tobacco, in some minor matters, together with some additional remarks.

To cure *yellow* tobacco you must use charcoal for the leaf; the stalk and stem may be cured with seasoned wood. The barns should be made as close as possible; and many farmers have cabin roofs to their barns, covered with boards which permits the heat to escape much better than shingle roofs. When you cut your tobacco put 6 or 8 plants on a stick, (according to size,) and place the sticks 8 or 10 inches apart on the tier-poles. If your tobacco ripens yellow, commence the heat by a thermometer at 90 degrees, and keep it up till the tobacco is yellow enough to commence drying the leaf, then raise to 100 degrees, and keep it up for three hours; then raise to 110 degrees, and hold on to this heat till you see that the tobacco is *well sapped*, and the tails begin to turn and get a little dry at the ends, (*for you cannot cure yellow tobacco until you get the sap out of the leaf*,) then raise to 120 degrees and keep it up for three hours; then to 130 degrees for the same length of time; and then up to 140 degrees, which must be continued till the leaf is cured. You may then take out your thermometer and make your fire hot enough to cure the stalk and stem thoroughly. A wet season will cause a redundancy of sap in the leaf, which will exercise the curer's patience and judgment in yellowing and drying the leaf. Early curing is the most successful whilst the weather is warm. I succeeded admirably on one occasion by letting the tobacco hang in the barn till as yellow as necessary, and then started the heat at 120 degrees with open door. If your tobacco ripens green, commence at 80 degrees and keep it at that point for half day; then at 90, and proceed as above. Be careful *not to let the tobacco become too yellow*; the leaves highest up toward the butt of the stalk must be our guide, as these become

too yellow first; and when the leaves that grow about the middle of the stalk become yellowish, (not *yellow*,) then raise to 110 degrees.

For a barn, 18 or 20 feet square, have three rows of fires, and three fires in a row. As soon as the tobacco comes in order, crowd it together as close as you can, and let it remain till the weather becomes cool, by which time the color will be *fixed*; for if you let it get in high order soon after being cured the leaf will turn red. If a damp spell occurs, build small fires to keep the leaf dry.

It is the custom of some farmers to keep the door shut whilst yellowing and drying the leaf, whilst others let their doors remain open, which seems to be the most rational plan, as the tobacco will not be subject to so severe a sweat, and the leaf will dry more speedily in consequence of the admission of air—for I presume that every farmer has observed that the tobacco which hangs about the door is the first to dry up, and of a good color. If your tobacco gets into a sweat with closed doors, open the door and let the fires go down; and after the sweat subsides, then go ahead.

Suspend the thermometer in the centre of the barn, with the top of the thermometer on a level with the points of the leaves below. A convenient mode of suspending it is to get a hickory switch about three feet long and make a loop at the little end through which to run a tobacco stick, and hang it on the tier-poles between the sticks of tobacco, leaving a piece of limb on the lower end like a hook on which to hang the thermometer; and thus you can conveniently reach it to examine the degree of heat. For negroes, a white thread should be tied over the figures indicating the heat, and moved upwards as you increase the heat.

In by-gone days, I primed my tobacco, but were I farming now I would not prime a plant, for it is reasonable to suppose that by not priming, you make more and finer tobacco, and the suckers are few and stunted, except at the three top leaves; and furthermore, it is natural to conclude that unprimed tobacco is less liable to fire than the primed, the sap being distributed among a greater number of leaves.

In fine, the seasons and state of tobacco has an important influence on successful farming, and experience must be our guide.

WM. R. HATCHETT.

Charlotte Co., Va.

N. B.—I cannot but conclude that the discussion (in the *Southern Planter and Farmer*,) in which I bore a part with others, relative to the proper mode of ditching out bottom lands, will be of lasting benefit to the farmers who will adopt the plan of cutting their ditches through the *lower* portions of land, which accords with nature's system of hydraulics, and is the only way to reclaim our lands that are now worthless for cultivation H.

[Mr. H. has for more than half a century been a successful raiser and curer of bright tobacco. We know him to be *authority* on this subject.—Ed.]

[For the Southern Planter and Farmer.]

A LETTER FROM GEN. SMITH.

[We are indebted to the courtesy of Dr. D. S. Watson for the following private letter from Gen. Smith. We are sure it will be read with interest by our readers. It is characteristic of every thing he writes—practical and sensible.--Ed.]

My Dear Doctor,—Your favor received. * * * * My farm consists of 225 acres, immediately adjoining our county seat, and is assessed at \$100 per acre for taxation. It is indebted for this high assessment to its location and improvements in great part. I made this year, however, about 700 bushels of wheat, about 25 bushels per acre, (one half of which I lost by lightning), about 1,600 bushels of oats, or 40 bushels per acre; about 350 barrels of corn, or 10 barrels per acre; about 80 tons of hay; 500 bushels of rata bagas, &c., &c. The offal of these various crops is carefully secured and fed to about 25 head of cattle, 12 to 15 head of horses, as is used to bed them according to its character, wheat-straw being used for the latter purpose. My corn-fodder is generally cut up by machinery and fed in that way. I rarely fail to buy wheat-straw, when I can pick it up cheap, although it is hardly worth hauling—writers informing us that straw is only worth \$3 a ton for purposes of manure. Hay is not usually consumed on the farm, but sold when it will command 75 cents per hundred; when it will not bring that price at home, I propose to hold it, as it will keep, or convert it into beef, perhaps the proper disposition for it at all times. I will now proceed to answer your enquiries.

The hay crop to be properly saved must be rapidly handled. On my little farm I cannot get along with less than two mowers. I start them about 8 A. M., when the night dews are under process of rapid evaporation. I follow immediately with the tedder, which easily scatters the grass cut by my two mowers. It is a light and wonderfully efficient machine, easily operated by any old woman and a mule, and can do more and better work than twenty men with pitch-forks. It is a revolving cylinder, with projecting claws, which picks up and drops the grass so as to let it fall by its own gravity, after the momentum occasioned by the revolution of the machine is exhausted—thus reaching the ground “in most admired disorder,” and curing perfectly. Mine cost in Alexandria, \$97.50, and would pay for itself twice over in a single crop like yours. These machines work as rapidly as possible, until the hands quit for dinner at noon. When work is resumed at one to half after one o'clock, the balance of the day is devoted to securing as hay, the grass that has been cut in the forenoon. To this end the tedder gives place to the steel spring rake, and with the mule and hand that worked the tedder in the morning, gathers the scattered hay into windrow. Of course, you will commence this work where the mowers began: in the meantime the men who mowed in the morning are *busily* engaged in preparing for the hay to be stacked or housed in the afternoon. At 3

P. M., the rake having got sufficiently ahead, the mowers who have prepared for the reception of the hay, take their teams, refreshed by three hours rest, and hitch each to a wagon, with proper hay frames, to which another must be added, as three are requisite to do the afternoon's work, and perhaps a fourth, if you have far to haul your hay. The wagons ready, will have to move where the mowers began, where they should find four active men with pitch-forks ready to load them with dispatch. As the horses, in loading and unloading, have much leisure, they must be put to a trot when their wagons are empty. As the loaders, from various causes, will have no wagons to load at times, they should be *required* to cock hay during such intervals, leaving such cocks to be hauled last, as they are in a condition to stand a shower without material damage. Hay not housed by 5 P. M., when the dew begins to fall, should be thrown loosely into the hay house, and so to remain until the next day, when the mowers, between 1 and 3 P. M., would stow or pack it away, giving it, being the last cut hay, 24 hours of ventilation without exposure. I have another important facility in unloading and housing or stacking hay, in the hay-fork, its pulleys and tackle. With it two men, a boy and a horse, you can unload and pack away a load of hay in five minutes. Cost about \$25. Of course you have it. In this way the succulence and color of the grass is to a great extent preserved. Clover-hay, now almost valueless in consequence of the manner in which it is usually cured, its foliage crumbling in the handling, assumes its rightful position in the list of animal forage, its leaves being no longer crisp, but tough and flexible as the timothy leaf; and having, by chemical analysis, as writers inform us, 19 per cent. of fattening and growing matter, is greatly superior to timothy, which has but 10 per cent. I do not use salt or lime in curing my hay. I formerly did so, (that is salt), but not seeing its advantage have ceased to use it. I will add that hay that is to be stacked, but is *not* before 6 o'clock P. M., had better be left over in good-sized, well put up cocks, to commence the stacking with the next morning.

I purchased my tedder of Herbert Bryant of Alexandria. It was made by Ames & Co., Boston. Any agricultural store in Richmond can supply or procure you one. There is another but I know nothing about it.

Undoubtedly, hay should be housed. Such houses as would answer the purpose would pay for themselves in a single crop. But all houses should be built so as to answer more than one purpose. My plan is to have a house in each of my fields, about 35 acres each, to hold about 70 tons of hay—the hay of the field. I have already built one house in or about the centre of the field, 60 feet long, 20 feet wide, and 20 feet high, with choice white oak posts, with plates, stays and rafters, the whole enclosed and covered with inch plank sawed to the proper length. When filled with hay, and you should conclude to sell it, in a single day you can work out hay enough, to work afterwards with press and hand under cover, devoting after-

wards your rainy days to bailing, &c.; or when empty using it for the shelter of stock; or if filled with hay, the price of which would not justify its shipment, then by feeding it out, *from the inside*, to steers purchased for the purpose, haltered in stalls, constructed all around the building, converting it, with the aid of meal, into No. 1 beef, leaving an immense residuum of invaluable manure to replace what the beef will have carried off, &c. Such a house has cost me here about \$120 in money besides my own labor. It is usual to have small hay houses in the hay fields north of the Potomac, but for the considerations I have stated, I greatly prefer those of the size, somewhat modified, as I have suggested.

To sum up, you will want two mowers and a tedder driver from morning until noon. With this force in perfect order, you ought to cut down and scatter 12 tons, but horse and man must move lively. In the afternoon the real struggle begins. At one o'clock the hay rake must be started and run until night. At three o'clock three wagons must be started, requiring four loaders, and at the same time must be started the hay-fork, requiring two of the most efficient men to be had, a smart boy and a strong horse, to unload the wagon and pack away the hay—11 hands in all.

WM. SMITH.

N. B.—Mrs. S. not only recollects you as so long and kindly practicing on me during my sickness at Gen. Anderson's, but sends her cordial regard. If you will visit us we will visit Mr. Benton, who got the premium at the State Fair for the best forty-acre field of corn—between 17 and 18 barrels per acre. I want to see and understand the whole process, and supply myself with his seed.

Fauquier Co., Va.

W. S.

[For the Southern Planter and Farmer.]

A REMEDY FOR MANY OF THE FARMERS' ILLS.

In consequence of the poverty and anxiety of our people to rally from their misfortunes, they are disposed to be unsteady in their purposes, in engaging in unsuitable enterprises and avoiding agricultural and mechanical pursuits; and you will render good service to your readers by impressing upon them the necessity of perseverance in any regular pursuit—and especially urging the farmers to stick close to their business and raising a variety of crops that do not materially interfere with each other.

This variety of crops will give steady employment to the laborers, who should be encouraged to be constant and contented with their homes; and their families to be made comfortable and *required* to give a helping hand at all times. It is to the mutual interest of owner and employee to do so, to keep up proper discipline, and to see that no idlers or loiterers are allowed to pass about the farm during work hours.

Whilst we should aim to diversify crops, we should be careful not

to undertake unsuitable crops, or stock breeding, never engaging in anything simply because others are doing so, who may be very differently situated. Some should raise tobacco, whilst his next neighbor probably should not. Wheat is a crop for rotation after oats, and oats after corn, and thus made more necessary than desirable as a paying crop, with Western markets opened upon us. Clover is an improver, and will mix with orchard grass, or may be sown alone alone; and the land, soon to be broken up, improved, cultivated a year or two in other crops, and back to clover again. Timothy, as a meadow grass on *suitable* lands, is valuable for hay, but is an exhauster of land and is too late ripening to mix with clover for hay to an advantage. Roots of the turnip species are of great value in winter for stock when green food is not to be had.

Cattle, sheep and swine of careful selections, from breeds adapted to the locality, and well cared for according to the season, will be valuable to those so situated as to rear them advantageously, affording an income to the farmer without detriment to the land; and often their gleanings of the fields is of decided advantage, especially with sheep; still farmers had better destroy their flocks than to graze into the ground young grasses. When hay is the crop, what stock they may advantageously use six months of the year, they may have no place for in pasture months, and should sell off in spring in same form. There is a rapidly increasing interest springing up in sheep, and as far as farmers are situated to raise them, let them do so, and let there be fifty where there is one, and let our people encourage the use of mutton in lieu of Western bacon. Each farmer has a share of waste, gleanings, garbage, etc., to support his shoats; then the grass and harvest field till corn is in the roasting-ear stage, when it is cheap food to feed it whilst the stalks and fodder are green enough to be eaten, the latest corn to be used last; then an abundance till the year old hogs and upwards are fat towards December; and with *judicious* curing the bacon will justify an average of ten cents or more for pork, and it will be sweet home-made meat, instead of probably swill-fed hogs of Western distilleries, slaughter-pens, and other filthy deposits of food for swine.

The breeding of horses is of great importance and much is to be considered—to what extent and the kind that should be bred. Instead of sending our money to the West for pampered horses and mules, let each person attempt to raise their own animals selecting females with a view to use and breeding. The colts are raised with but little perceptible cost, and from two and a half years old, by careful use, they may pay for their food; and then in a year or more they are probably wanted at from \$100 to \$150.

All this requires thought and attention, and the eggs being well divided in a number of baskets, their results come in like mixed crops at a timely hour peculiar to them, and thus through the year, there is a fresh and varied occupation for each one on the farm.

Stock can be increased rapidly, and if good kinds, the whole sur-

roundings improved; and there is no section above tidewater in which this line of policy cannot be well followed, even in the tide-water districts.

Whilst a farmer may wish to change off certain animals, he may wish to have others in their stead to suit the season and crops, which may be easily effected by public sale-days or private treaty; and it is but a matter of time that we of Virginia must be a mixed husbandry people, grazing more and stirring the soil less frequent, and then to a *purpose* and with a will, and to return to it to grass, and in an improved condition.

Now, Mr. Editor, let your articles encourage this line of policy, and let not your readers catch at each bubble or reality that present themselves, but select that which seems adapted for "the situation" in which each one finds himself, and let us be *employed*, that we may the better avoid opportunities to make idle outlays and waste time in trying to find a mode to avoid paying our just debts, and thus educate our minds to find an excuse and a way, we, and those who are to follow us, can *dodge* the adjusted debt of our State, and thus live more by their wits than by honest labors in whatever branch our lots in life may be cast.

S. W. F.

[Our worthy correspondent who will be readily recognized by his *initials*, has struck the key-note of success for our farmers. A farmer should carefully study the character of his soil—the kind of crops best suited to it, the market for the same, the labor available for its cultivation—indeed everything affecting his success in any way, and then having carefully determined upon a line of policy or mode of cultivation, adhere to it until he has given it a fair trial and honestly tested its results.—ED.]

[For the Southern Planter and Farmer.]

FODDER PULLING.

The March number of the *Southern Planter and Farmer* contains a communication from Dr. Pollard, in which he still contends that pulling fodder injures corn, and that the fact has been sufficiently established by experiments made and reported at different times, by men of known ability, to decide by test such questions. In a former article he gave the tests of Mr. Seaborne and Mr. Harrison, which I pronounce unsatisfactory and unreliable, for the reason that the corn to be compared was taken from a given number of rows in the field and weighed, to ascertain which row, this or that, produced the most corn by weight. If I desired to ascertain what fertilizer was best adapted to the production of corn, I should probably pursue this plan. But I regard the question before us, as an entirely different thing. Here is a crop of corn in the field already made, and now we desire to know whether we can pull the blades and cut the tops off this corn without injury to the grain. We desire of course, the *grain* should not be injured, and yet we wish to save the fodder. Perhaps if cut off at the ground both ends will be met; or possibly

either will injure the grain more than the fodder is worth. Now it seems to me that the most rational thing a farmer could do under such circumstances, would be, to select three lots, no matter about the size, nor whether equal in size, so that the corn is good and uniform, and there is enough in either lot to make a bushel of shelled corn. Then strip the blades and cut the tops from one lot, cut off at the ground and shock one lot, and leave the third with blades and tops all on, to try out. Then at gathering time, house these three lots separately and let them remain until thoroughly dried out, it matters not how much longer. The measuring and weighing may be done in January or May, or a year afterwards. The "rats and rogues" will not affect the *quality* of what they leave, and if they leave him a bushel of each, his test will not be affected by what they take away. Now then, when he measures and weighs a bushel of shelled corn from each one of these lots and finds that they differ in weight from one to three pounds, is he not authorized to conclude that his treatment of the corn in the field, with respect to the fodder, made the difference? But is there any defect in the mode of test? Yes, there may be. The fodder may be pulled or the corn cut down too soon, or too late. It may be a matter worthy of experiment to ascertain *when* fodder may be pulled or corn cut and shocked. Experienced farmers, however, agree pretty well by the mere looks of the corn.

I think all the points mentioned above are absolutely essential to a reliable test. Uniformity in the field, thoroughly dried in the house, shelled and measured in equal quantities by measure, and each measure weighed, in order to determine which is the heaviest corn by measure. Now all the experiments referred to by Dr. Pollard, as well as Mr. Ruffin, failed to meet the above requirements in two particulars—they measured their quantity by the surface it grew on, and they failed to measure it in the half bushel; and then if left in the house long enough to get dry, the "rats and rogues" would, or might determine the question after all. *This is a good argument*, and I am indebted to the Doctor for it, not that he intended it for my benefit, but in stating that Mr. Seaborne let his corn get dry before he shelled it, the enquiry ran through my mind, what were rats about while it was drying? Of course they were testing the quality of the different lots, and every body that knows anything about rats, knows they are good judges of grain, and that they always take the best first.

Now I think the Doctor "had better give it up," until he shall have made a test of it himself, and then he can speak of what *he* knows.

But if the test made by the Hillsboro Club was correct, why be surprised at it? If my theory is correct, the results of that experiment are perfectly rational: and I may say my theory is based on those results.

When a stalk of corn is cut off at the ground, all circulation ceases, so far as adding substance to any part of the product is concerned. The whole structure is porous, and the fluids doubtless evaporate without increasing the weight of any part. However, the matter is so easily tested if one will only take the trouble that I hope a number of farmers will take it upon themselves to experiment in the way indicated above, and thus settle the question in the only way it can be fairly conclusively settled, and each give the result of his experience through the columns of the *Planter*.

S. M. SHEPHERD.

Greenwood Depot, Va

[For the Southern Planter and Farmer.]

Will you allow me to ask a few questions in your valuable magazine, which, if properly answered, must benefit many besides myself.

I have an orchard of about two thousand pear trees—some of them six years old. They have been carefully cultivated, and until the summer 1870 three looked as thrifty and promising as I could expect them. During the summer we had a severe thunder-storm, accompanied by the most severe high wind. A few days after the storm I noticed, in passing through the orchard, a great many trees (which were vigorous a day or two before) blackened and drooping as if scorched by the lightning—I could only then attribute it to the lightning. I had the affected branches cut off, and in a few days I noticed that the disease was increasing, but no new tree was affected. In the fall of the same year I had the trees closely pruned. Some I saved, the majority died. In the summer of 1874 I noticed the same disease appearing to a more alarming extent. In December I cut off every branch that was at all affected, and the trees that looked as if dead, I dug up and put new ones in their places. Now I wish to know the cause of the blight, and the remedy for it. I have watched with interest the proceedings of the Farmers Club of New York. A great many theories were advanced regarding this blight, but none were practical enough to suit my views. If deep plowing is the cause, why were not all affected in the same way? All were plowed alike. You often see a vigorous tree and a blighted one standing side by side, only twenty feet apart. They were planted alike, measured alike, and cultivated alike. What is the cause of it? Can some reader of your magazine give the cause and the remedy? If so, none will thank him more than

ENQUIRER.

[Will some of our Horticulturists answer the above.—ED.]

There are now over 650 Subordinate Granges in Mississippi, comprising a membership of fully 40,000.

Regulations for Organization of Pomona Granges is ready for distribution.

The headquarters of the National grange has been removed to Louisville, Ky. Persons desiring to correspond will note the fact.

[For the Southern Planter and Farmer.]

MELIORATION OF GARDEN SOILS.

We are inclined to the opinion that the melioration and proper culture of gardens is very much neglected by our farmers. The advantages of a well kept garden, which in fact is a miniature plantation of diversified crops, are second only in importance to that of a well tilled farm; and one of the sources of the health and welfare of the family, and good living cannot be expected where but little attention is paid to vegetables and fruits, of which latter a few dwarf sorts should be cultivated in every garden. They soon come into bearing and are always appreciated. We mean the kitchen garden and *truck patches*, from which supplies for family consumption are produced.

The labor of cultivating vegetables, especially in stiff tenacious soils is greatly increased year after year by annual cropping and neglect of fertilization, causing the soil to *run together* and become cloddy and tough, and the best pulverizing implements may be employed with only partial success; consequently the crops become smaller and of less value in proportion to the negligence and inattention.

We now proceed to consider *how* we can best remedy this yearly increasing barrenness and inaptitude of soil and fruitless expenditure of labor.

The sovereign remedy for stiff compact soils, is a bountiful supply from the barnyard and stables, and we should manage and practice as follows:

After the crops have been removed and the ground softened by the autumn rains, but not wet, the soil should be moved to the depth of two spades, and the surface kept in a rough and ridgy condition. After having received a few hard freezings, a *liberal supply* of decomposed barnyard or stable manure, or a mixture of both, should be freely applied. The soil cannot easily be made too rich, nor can there be too much soil; and as soon as the ground can be worked, re-spade and mix in the manure. This may be repeated during the latter part of winter; and in early spring the use of the rake will produce a good and sufficient tilth; and for late vegetables, the mattock and rake will make it all right.

It is necessary that this process should be practiced to some extent every year, by means of which the crops will be doubled or trebled, the labor of cultivation greatly reduced, and the quality of the crops improved to a great degree.

Another means employed to bring about disintegration of soils is *lime*; in quantities varying according to the condition of the soil: but, this agent will not act with effect unless the soil contains vegetable matter, producing humus and a medium proper for its reception and action.

SANDY SOILS.

Many of our gardens are so situated as to present difficulties of a nature exactly opposite to the soils we have just referred to; and the means to be employed for correction are essentially different, except, as to the use of lime, which has the singular property of pulverizing stiff soils and closing those that are sandy and light.

In addition to the use of lime, and even without it, sandy soils may be rendered very productive and kind by liberal dressings of muck, ditch mud, and clay. These should be collected in heaps or composted in the fall, and applied in early spring, mixing well with the soil. This treat-

ment may require more labor and expense than that expended on stiff soils, which may also be rendered more friable by the use of sand, but the results will be equally satisfactory.

We have had reference mainly to gardens and truck patches, cultivated for family use, but the means recommended may be extended to commercial gardens and farming lands as well.

Whilst on the subject of gardens it may be proper to remind cultivators that, without good and improved utensils there is loss of time and labor, and we would especially recommend for small gardens the four tined steel spading fork. It is a very valuable implement; and, the steel rake with *eight* teeth is indispensable in destroying with facility incipient crops of weeds, and in smoothing the soil and producing that fine tilth so necessary in putting in seeds and their after culture.

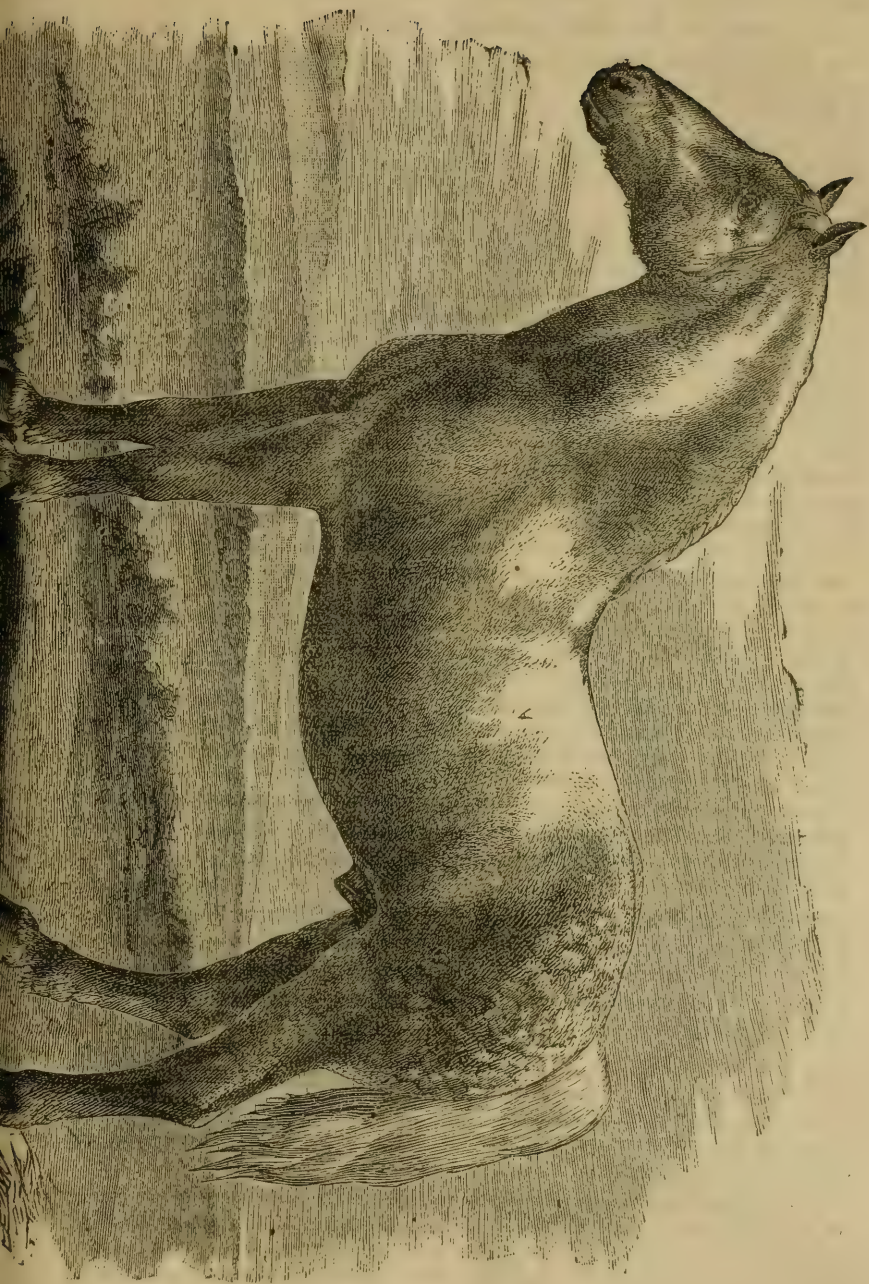
Keswick Depot, Albemarle county, Va.

J. FITZ.

MORE EDUCATION AMONG FARMERS.

It is a fact shown before the British Parliament, that "while the rental of land in Ireland had doubled during the previous hundred years, and that of England tripled, the rental of Scotland had sextupled itself in the same time." This is attributed mainly to the vastly superior school system which Scotland has possessed, and the skill and enterprise it has fostered among the people. It is a fact that a truck-farmer within a dozen miles of any of our large cities, will get a clean profit of two or three hundred dollars from an acre of land, while the average old-style farmer, hardly gets that amount of profit from his hundred acres or more. These facts are worth studying by the still large class who do not see the use of agricultural papers and teaching, etc., think muscle is the main thing in successful farming. The truck-farmer studies his market, knows what is wanted, learns how to raise it, when and where to sell it, believes in manure, buys it, believes in knowing all about his business, takes his paper, reads and thinks, don't kick at facts because they are printed, keeps his eyes open, and drinks in knowledge from men and books. He keeps learning and succeeds in his business. There is still a large class of our farming population completely stereotyped. Many take no agricultural paper, attend no fairs, no farmer's club, try no experiments, have no faith in improved tools and stock, and are hardly able to tell at the end of the year whether they lose or gain in their business. Success in cultivating the soil is already, and is to be more and more, dependent upon brains. Men who read and think most, plan most wisely and execute most skillfully, will succeed best. We need all the help we can get from the teachings of science, from journals, from fairs and clubs, as well as from the daily experience of the fields.—*American Agriculturist*.

"THE COLONEL" is a dark iron gray, foaled at Courtelevain, France, the 15th of April, 1863, by Fleur d'Epine, belonging to M. Gannet, who took the premium of the first prize at Chartres at the exhibition of 1863, and sired by Empeur, belonging to M. Desvauxrose of Courville, Eure et Loire, who took a premium at Illiers in 1861, at Evreux in 1863 and Illiers in 1865. (Signed) The Mayor of Cernay, Bondeau, France, April, 1866. *Description*.—The Colonel is a dapple iron gray, weighed when 3 years old, on his arrival from France, 1280 lbs., and weighed the 20th Oct., 1869, 1690 lbs, and March, 1875, 1916 lbs., and measured 16 hands 2 inches in height, is square and full in quarters, docile and sound in every respect. His colts are usually gray, with his white stripe in the face, and not coarse or rough, but of quite a finished appearance. He walks over 5 miles per hour, trots square and smooth, and has fine and lively natural action and speed for his class and size, and was imported in 1866. He is still owned by S. W. Ficklin, of Belmont Stock Farm, near Charlottesville, Va. The Colonel has been exhibited at all our State Fairs since their new era, and at Lynchburg, Culpeper, Staunton and Leesburg, and four State Fairs of Maryland, and taken first prizes and honors in all cases but once. Each at Richmond, Staunton and Baltimore three second prizes were awarded him. See next page for cut, which fails to do him justice.



PROFITS OF SHEEP.

A correspondent of the *Practical Farmer*, residing within twenty-five miles of Philadelphia, states that one of his most certain and reliable sources of profits from year to year is keeping sheep. When I first began farming, twenty years ago, he writes, I depended entirely on Southdowns. They have always proved with me prolific breeders, capital nurses, hardy and good feeders, and my Southdown mutton ranks in the market with "gilt-edge" butter. I inform my regular customers when I am going to have a fine leg or loin of pure Southdown, and they go off fast at three to five cents above the market price. In fact, Southdown mutton is the best mutton in the world.

If quality of meat was the only desideratum I would make no change, but as coarser wools now bring the highest price, and as perhaps, I gain a little in weight, (of which I am not altogether certain, but at least do not lose any,) I have made one cross on my flock of 100 ewes with the Cotswold. The best results and the finest carcass have resulted where the Southdown buck was used on the Cotswold ewe. I do not want any finer sheep than this makes, and I try to keep them for my purpose one-half Southdown and one-half Cotswold. What lambs I have to spare are all sold in advance to your butchers about eight dollars per head. I raise roots, which I consider indispensable in the sheep business, and with *good shelter and good management*, I have the lambs in the market in March and April. I consider the roots make a good substitute for grass, keeps them in good heart and with fine health for early pasture. It promotes the flow of milk appetites. I have always followed the advice in your paper, to keep all my animals *healthy and thriving*. If they once go down or become stunted, much of one's feed is thrown away. Two-thirds of my ewes usually have twins. With lambs at eight dollars to nine dollars each, and wool at fifty cents per pound, your readers can figure up my profits on 100 ewes.

I will close with one remark: that without a root crop of about 1,000 bushels, I would not keep sheep. Not that these are all fed to the sheep, as cows and horse are all benefited by them, but for sheep they are indispensable.

[This necessity for turnips does not apply with equal force to our Southern farmers, as our pastures furnish something green nearly the whole of the winter; still we advise their cultivation for this purpose. Any one who will sow rye among his corn in August, will have something equally as good as roots, at much less cost.—Ed.]

SHEEP DID IT.

A Maryland farmer, who has lately visited some of the best sheep farms in England, makes the following statement in the April number of the *American Farmer*:

Within the last fifteen months forty-eight ewes belonging to the estate of Aston Rowant, have produced 295 lambs, all of which are still living, or have been sold fat. Forty-four have each three pairs, and most of them in less than fourteen months. Two ewes brought seven lambs each, viz: two a few days before Christmas, 1872; two in June, 1873; and three in January, 1874. One ewe produced eight lambs within fourteen

months—two of the lambs were sold for £5 at Easter. Yesterday the same ewe had four lambs, all of which are strong and healthy; the mother is doing well and in good condition. Twenty-one of the above ewes are Dorset—twenty-seven are either Hampshire downs or half-breeds.

The above is taken from the farm record of the estate, under the management of T. S. Jackson. The American visitor concludes his report in these words:

The estate of Aston Rowant, it should be remarked, is not one that is carried on for mere profit. The lawn, shrubbery, conservatories and plantations generally exhibit the exquisite beauty with which wealth and taste adorn so many places in England. Regarding them with intense gratification, and thinking of the immense amount of money required to keep up this display, I said to my worthy and intelligent guide: "I should like very much to know the pecuniary results of this style of farming in your country." He replied: "As you live in America, I will tell you what I do not speak in the neighborhood—my balance sheet for last year shows a clear profit of £1,800 (\$9,000)," and he added emphatically, "Sheep did it!"

[We do not believe that the statement with regard to the sheep is correct. It is simply impossible. We believe in sheep. We think them the best stock the farmer can raise, but we don't believe in miracles of this kind.—ED.]

THE GREAT FARMER OF THE WORLD.

A Sacramento paper publishes the following respecting the farming operations of a man whom it denominates "the largest farmer in the world," which, considering that Dr. Glenn "runs" his farm of 50,000 acres himself, personally superintending it all, the application is perhaps correct. His case illustrates a point often made, that farming may be conducted upon a large scale as well as any other business, and that when it shall be carried on with the same order and nice adjustment of means to end as is cotton or iron manufacture, it will pay as well.

"The great farmer of the world, Dr. Hugh J. Glenn, of Jacinto, Colusa county, California, has raised and harvested the past season, on his own farm, 600,000 bushels of wheat. This would load eighteen 1,000-ton ships, or three hundred canal boats. All this wheat he has now in his warehouses, ready for shipment when the water in the Sacramento river rises sufficiently. The Doctor pays \$90,000 freight to put his wheat in the San Francisco market. The Doctor is a wonder to the agricultural world and to himself. He runs ninety gang-plows and a whole county's population in the harvest-field, with a dozen threshers. His farming is not confined to wheat alone. He markets \$100,000 worth of stock each year. Dr. Glenn is a practical farmer, and manages all his immense business himself. He can mend a trace and make a key to an ox-bow with his jack-knife, just as easily as drawing his check for \$100,000, which he can do every day in the week. Dr. Glenn is a big-hearted man, and was born in Augusta county, Virginia.

BREEDING AND FEEDING PIGS.

Mr. Joseph Harris, of Rochester, N. Y., stated, in an address at the meeting of the Massachusetts Board of Agriculture, that he believes in having fattening pigs grow larger all the time. Food consumed by hogs that only hold their own is all wasted, except what is saved by the manure. Much depends upon good breeding. We should breed out all poor points, and then breed in a good, digestive apparatus. He would have pigs eat and digest more food than they do now; the more the better. He related an experiment in running a threshing machine. One horse being disabled, he tried to make its mate do the work. He found that it took all the power of one horse to keep the machine going, without threshing a particle of wheat. When the other horse returned, he saw he was really getting his wheat all threshed by one horse, although two horses were at work. A third horse being hitched in, the amount of wheat threshed was just doubled. Fifty per cent. more power gave one hundred per cent. increase. It was the same with pig feeding—give a pig just enough to run the machine and the power is all lost. What is added after that is all gain. So we want pigs that will eat, digest and assimilate a large amount of food. The number of pounds of corn required for a pound of pork depends largely upon the breed of hogs fed. Experiments have been tried, which show a difference equal to the difference between eighty-five per cent. and fifty-seven per cent., as the cost of supporting the present condition.

The economy of cooking food depends upon circumstances; as, for instance, the ability of the hog to assimilate more or less food than he can digest. Cooked food must be given more frequently than uncooked food. The value of the manure made from a bushel of corn does not vary greatly, whether fed to one animal or another. Hog manure is rich, because hogs have good food to eat. There is nothing in the manure except what is in the food. He believes that he can obtain phosphoric acid, nitrogen and potash cheaper than animals than from commercial fertilizers.

THE GRANGE.

Bankers have their "Boards," merchants and manufacturers their "Exchange," mechanics their "Unions," but the farmers and tillers of the soil have, until within the last few years, had no such organization; hence, they have labored under great disadvantages. The Grange is their "Union," and is designed especially for their benefit, and generally of the whole country; for as agriculture is the foundation upon which rests the prosperity and success of all other enterprise, whatever shall be of benefit to those engaged in this highly honorable and necessary employment, must of necessity result in the good of all others. Hence arises its importance, and its encouragement and maintenance is to be the desire of every well wisher of his country.

ITS SECRECY

is only intended to secure its purity and permanence, and to promote the general welfare of the Order, and contains nothing to the

injury of other occupations. In its workings it to a great extent secures the members from imposition and furnishes the means of excluding the unworthy from its benefits, and while none are received among us on account of their wealth or honors, none are excluded on account of their poverty or misfortunes, if found otherwise worthy.

ITS SOCIAL FEATURE.

The Grange is highly social, and affords an opportunity to its members of cultivating the social relations among themselves to an extent almost unknown in other Orders. At its regular meetings, which are usually once a month, all the members have a kind of reunion, when their various plans and purposes, the general news, and various other matters are discussed, and especially agricultural, horticultural, and domestic economy, stock raising and kindred questions are investigated, views interchanged, etc., and thus all are benefitted. In these monthly re-unions many who would startle at the idea of making a speech, do, in a conversational way, impart to their brothers and sisters of the Order much valuable information by their social "chit-chat." It was contemplated by the founders of the Order that at these meetings each will bring his pic-nic basket for the feast; when this is practiced it becomes a kind of holiday and relaxation, much needed by these sturdy sons of toil, and they return to their homes with renewed energies, and with greater zeal and vigor, to again resume their daily toils. We hope to see this feature of our excellent Order carried out in all our granges. One day in the month can be well spared for this purpose, especially when such great benefits are derived from it. Those Granges who have practiced this feature of the Grange have found this the profitable day of the month, while upon the contrary, where the social feature is neglected, the attendance on the meetings is small; and if even a quorum is present, the business is done hurriedly and in an uninteresting manner, and the members become careless and are ready to conclude that they do not see much of the benefit of the Order, and the time given to it is all thrown away. This is one great reason why some of the Granges are in a languishing condition.

ITS EDUCATIONAL FEATURE.

In many parts of the country the Patrons of Husbandry are not only sending their sons to agricultural schools and colleges (as all that can should do), but are also organizing Grange schools in their respective neighborhoods, for the education of their children at home, where they will be educated and trained under the eye of their parents and home influences, thus uniting practice with theory. We would be glad to see all our young men in agricultural colleges, where they could obtain all the advantages of scientific instruction; but as this is out of the power and beyond the means of many, we are glad to see steps being taken to educate, not only our sons, but our daughters likewise, in schools within our income, while at the same time they are kept familiar with the every-day home affairs

which is calculated to make them more familiar with those things when the entire responsibility falls upon them, as it soon will. One of the great wants of the South is an intelligent, educated, and scientific class of farmers and farmers' wives. Whenever we can have this, and have our farms cultivated on scientific principles, with improved implements, and proper attention given to raising improved breeds of stock, there is no country in the world that will be superior to the Southern States. Let us therefore, as Patrons, labor for the accomplishment of these purposes, and we shall soon see our labors abundantly rewarded.—*Exchange.*

EXECUTIVE COMMITTEE.

The Executive Committee of the State Grange of Virginia met in Staunton on the 13th July pursuant to call. Present—A. B. Lightfoot, J. W. White, R. L. Ragland, and A. M. Moore.

A petition from a Subordinate Grange asking relief in behalf of a distressed family was considered, and the committee rendered as their opinion that they had no constitutional authority for making donations from State treasury for such purposes, and recommend the reference of the application to the County or District grange to which the party belongs.

Resolutions fixing the commission of agents (heretofore adopted) were amended, as were also resolutions relating to Pomona Granges.

Evidence in a case of a brother who had joined the Order who was ineligible was submitted. Committee sustained the Worthy Master in suspending the brother from his office of a Subordinate Grange, and ruled in view of the fact that he is still engaged in an occupation in conflict with the purposes of the Order, that he be allowed the privilege of withdrawing within thirty days from the issue of notice, failing in which the Worthy Master of the State Grange is directed to notify his grange that he is expelled from the Order.

The committee deems it inexpedient at the present time to take action on the question of insurance.

The Chief of Bureau submitted his quarterly report.

Attention was called to the following resolutions, reported to the State Grange by the committee on good of the Order, but which was not finally acted on by that body:

Resolved, That it is expedient to return a portion of the charter fees to those Subordinate Granges which were left destitute of funds after meeting expenses of organization.

The committee adopted the following resolution:

Resolved, That the claims under the foregoing resolution are considered just, and the committee recommend payment of the same by State Grange.

The committee fixed the tax on the commissions of clerks and agents for the support of the Chief of Bureau.

The following rule was adopted:

No Patron shall make public the confidential circulars issued by the Chief of Bureau, under penalty of expulsion from the Order.

The following resolution was adopted :

Resolved, That the plan, rules, and regulations for the organization and management of Pomona Granges recommended and adopted by the National Grange, be adopted and recommended by the committee for the organization and management of Pomona Granges of Virginia, as far as the same are applicable, and according to the laws passed by the Grange on this subject, and that the Master and Secretary of the State Grange be and they are hereby authorized to publish said rules and regulations for the information and guidance of the Pomona Granges.

Brother J. W. White was authorized to make contracts for printing of the State Grange.

The Treasurer submitted a report of receipts and expenditures to July 1st, 1875.

The Secretary was directed to prepare and publish an abstract of such portions of the proceedings of the Executive Committee as may be properly made public.

The committee adjourned to meet in the city of Norfolk, subject to call of the Chairman.

M. W. HAZLEWOOD, Secretary.

NEW YORK PATRONS OF HUSBANDRY.

KNICKERBOCKER GRANGE NO. 154--RECEPTION OF DISTINGUISHED VISITORS.

Knickerbocker Grange was organized in New York city in February, 1875, by a number of gentlemen interested in agriculture, most of them practical farmers, but including several editors of agricultural journals. It numbers about eighty members though this number would be increased by hundreds but for the strictness of the rule to admit none not practically interested in farming. A majority of its members are market gardeners who live on the lines of railroad leading out in all directions from New York, and to whom the city is probably as central a rendezvous as could be found. The following are the officers of the Grange:—D. D. T. Moore, Master; T. E. Willson, Overseer; C. E. Otis, Treasurer, and J. W. Naughton, Secretary. They are now negotiating for a large room, to be centrally located and used as a Grange headquarters for brethren visiting the city, with reading room and library, making in fact a Grange Club House for the use of members of the Order temporarily visiting the metropolis. It is designed to establish also an eating house, with sleeping rooms attached, for the convenience of country Grangers. Such an house is almost a necessity for members of the Knickerbocker Grange, many of whom live from five to twenty miles from the city, and are forced to remain in New York over night whenever they attend a meeting.

Knickerbocker Grange had the honor the past week of extending a welcome to Col. D. Wyatt Aiken, Master of the South Carolina State Grange and member of the National Executive Committee. Among visiting Patrons present at the Grange rooms, No. 189 bowery, were Mortimer Whitehead, Master of the New Jersey State Grange; John H. Vail, Master of Chester Grange; Nathaniel Munday, Master of Elizabeth Grange; J. D. Todd of Golden's Bridge, R. S. Todd of Three Rivers, C. H. Hutton, State Purchasing Agent of Virginia, and brethren from Westchester and Orange county N. J., Pennsylvania and Virginia. Brother Whitehead of New Jersey, acted as Master, and after the initiation of a candidate to the degree of matron, a recess was taken for refreshments. Upon reassembling Master Aiken delivered a brief address, full of instruction, upon the ritual, explaining the meaning of the secret work, and the necessity for its strict observance. Brother Whitehead followed, dwelling particularly upon the social and educational advantages of the Grange, which has already made a great change in the ancient order of things in the country districts. Other speeches of a complimentary and personal nature were indulged in, and the occasion was taken for many interchanges of views that will be of material benefit to the Order.—*Rural New Yorker*.

LINES WRITTEN UNDER THE DOG-STAR.

The following question was asked in the catechism of the Commissioner of Agriculture, returnable June 15th: "What is the principal obstacle to sheep-raising?"

The response from the correspondents was so uniformly "dogs," that Mr. J. A. Stewart, (who happened to be in the Commissioner's office during the conversation in reference to it) was requested to write something on the subject. After a short absence Mr. Stewart returned with the following:

ON DOGS.

A HYMN OF RESIGNATION.

Tune: "Old Father Grimes."

To be sung by Grangers at their meetings, and by Farmers generally.

"Let dogs delight to bark and bite,"
Or chase the buck and ewe;
Let dogs eat sheep while farmers sleep,
"For God has made them so."

Let dogs come forth to fill the earth—
Let sheep in plenty grow,
To make the meat for dogs to eat,
"For God has made them so."

Let dogs, a score, surround each door,
The lank, the lean, the low—
Or track at night, the lambkin's flight,
"For God hath made them so."

Let flop-eared hounds range pasture-grounds,
To scent the buck and ewe;
Let curs yelp round, as well as hound,
"For God has made them so."

Let every man keep, if he can,
A dozen dogs in tow;
And let their greed on mutton feed,
"For God has made them so."

Let man eat hogs—feed sheep to dogs—
Raise mutton here below
To feed the dogs, while man eats hogs,
"For God has made them so."

WHERE THE MONEY GOES TO.—Some people cannot understand why it is that the residents of the Southern States are so crippled financially. Let them ponder over two facts, and then they will see more clearly. Georgia alone paid \$24,000,000 for grain, meat, flour, meal, horses and mules, in 1873, and Alabama about \$18,000,000. That's what went with the money. It will not be so again. The amount this year has already been reduced in Georgia to about \$10,000,000, and in Alabama to \$8,000,000, and but for the meat, neither State will have occasion to spend more than \$5,000,000 for subsistence next year.

Family Department.

WHAT SHALL WE EAT.—

The paper by Dr. Cutter in the last issue of the *Journal*, upon the chemistry effects of fine flour, has awaked much interest and inquiry among our readers. There can be little doubt that the questions asked by the writer are of much importance to every one, and that the exclusive use of bolted flour in bread-making is opposed to the science and knowledge of the age in which we live. We grind that noble grain, wheat, in our powerful mills, and then with the bolter remove from the powdered grain everything that resists the action of the stones, so as to retain for use only the starchy portion, which is elegant to the sight. In the rejected portions are found the most important nutritive principles, and these, in the form of "shorts" and "fine feed," we give to our horses and our cows. As we have looked into the "bins" at the farm, filled with these rejected articles of human food, the exclamation has been often forced from us, "What a pity!" Pity indeed, it is that "fashion" should over ride interest and physical well-being; for nothing but fashion holds the *snow white* wheaten loaf in its place upon our tables.

If this must continue, we would suggest to those who desire to obtain all the elements in food necessary to health, to procure the wheat phosphates and nitrogenous compounds by a free use of milk. If a generous milk diet is associated with the white bread, the evils of imperfect nutrition may be avoided. Nothing excites the lacteal

secretion in cows like miller's "fine feed," and we find in the milk-pail in new associations the rich elements we reject in the grains of wheat. Very few indeed can obtain pure milk and cream, but every family ought to be able to obtain whole wheat flour, in its best condition. At the present time, it is the practice to a large extent among millers, to grind the finest, soundest wheat into fine flour, and the poorest into what is call "Graham flour." This term "Graham flour" ought no longer to be used. It is a kind of general name given to mixtures of bran and spoilt flour, to a large extent unfit for human food. What we need is good, sweet, *whole wheat* flour, finely ground, and securely put up for family use. This article we do not find in the market, and the Western miller who will give his earnest attention to furnishing such flour will realize a fortune speedily. The crown loaf made from whole wheat is to our eye as handsome as the white. It can be made with all the excellences of the white, so far as lightness is concerned, and it is sweeter and more palatable. With this loaf we secure all the important nutritive principles which the Creator for wise reasons has stored up in wheat.—*Journal of Chemistry.*

APPLES AS FOOD.

We can fully indorse the following from the *English Garden*: With most of us the value of the apple as an article of food is greatly underrated. Besides containing a large amount of sugar, mucilage, and other nutritive matter, apples contain vegetable acids, aromatic qualities, etc., which act powerfully in the capacity of refrigerants, tonics, and antiseptics; and if freely used at the season of mellow ripeness, they prevent debility and indigestion, averting, without doubt, many of the 'ills which flesh is heir to.' The operatives of Cornwall consider ripe apples nearly as nourishing as bread, and far more so than potatoes. In 1801—which was a year of much scarcity—apples, instead of being converted into cider, were sold to the poor; and the laborers asserted that they could 'stand their work' on baked apples without meat, whereas potato diet required the addition of meat or other substantial nutriment. The French and Germans use apples extensively. The laborers depend upon them as an article of food, and frequently make a dinner of sliced apples and bread. There is no food cooked in so many different ways in our country as apples, nor is there any fruit the value of which, as an article of nutriment, is so great and yet so little appreciated.

RED ANTS—HOW TO GET RID OF THEM.

If any of your readers are troubled with the red ants getting into their good things, I have a bit of information in reference to them which every one thus plagued would be glad to have. The red ant will not crawl on iron; and to prevent their going into your dairy, meat-safe, or sideboard, you have only to place them on iron feet,

which may be done in the following manner, viz: Bore holes in the lower ends of the legs; put in iron rods of suitable size, which should extend three inches below the wood. Rest on rocks, if out doors; if in the house, on bits of slate or sheet-iron. I have had my dairy thus fixed for the last ten years or more, and the first one of these little pests has yet to show itself in it.

Fluvanna county, Va.

J. C. HOLLAND.

SMOKING ROOMS IN BOARDING SCHOOLS.—The *Philadelphia Medical and Surgical Reporter* says: "We have recently been surprised to learn that in two well patronized and highly praised boys' boarding schools, near this city, *smoking rooms* are kept for such of the boys as have permission from their parents to smoke! We are further informed that these are not singular in that respect, as many other schools also have them. The pupils are from nine to eighteen years of age. Surely, if parents are so grossly ignorant or criminally negligent of the laws of health, professed guides of youth ought to know better, and discourage by every possible means the use of tobacco in growing boys. It may be a question whether it is harmful to a man, but there is none whatever that it is seriously injurious to boys." This fact, by the way, is not so generally known as it ought to be. Fathers who smoke sometimes feel that to forbid their boys the same indulgence savors of inconsistency; but they may safely take the ground that tobacco should not be used in any form during the period of growth and adolescence. As our contemporary remarks, the mischievous effects of the weed in boyhood are unquestionable, whatever difference of opinion there may be as to its moderate use later in life.

THE "HEATHEN CHINEE" ON RAILROADS.

The following, according to *Iron*, is a specimen of what the *Houei Pao*, a Shanghai newspaper, has to say about the proposed introduction of railways into China:

"Remember, O reader, how the Celestial Empire prospered for three thousand years, till the barbarians came in and introduced their horrible customs. Now they allow no one to rest. They keep everything moving. They rush with their accursed engines into every creek and river of the country, spying out and worrying a happy and industrious people. The English are like their own steam, always 'boiling and bubbling.' They upset everybody to make money out of them. They have drained the land of Sycee silver, and now they want steady, law-abiding subjects of the sun and moon to spend their money in railway engines, which blow up and cut people into little pieces more effectually than the public executioner could do. The idea is monstrous.

"Canals are much better than railroads. The good Confucius invented them, and it was during his life on earth that they were dug. They have been tested by time and experience, whereas rail-

roads are only sixty years old. Life on a canal junk is tolerably secure. A man can sleep by night and fish by day, and hold his soul in peace. A merchant need not buy a coffin before he starts upon a journey. All he wants is time and patience. There is a commercial advantage, too. Goods cannot be accumulated, and thus prices can be kept up. But note what happens when railroads are introduced. In the first place, they are dangerous. They love accidents. The engines are like gunpower with fire under it. Trains run into each other, and leave only corpses and lumber on the road; or they rush off the tracks, jump down precipices, tumble into rivers, and very often crash through honest men's houses. Sometimes they run away of their own accord, and then they go so fast that wheels fly to pieces and kill everybody near them. The barbarians know all this so well that they keep surgeons to attend to the wounded, or pay beforehand for the coffins, perfumes, colored papers, crackers, and other funeral offerings to the priests of the great Joss. Then they publish big books full of lists of accidents, and of the killed and wounded. Beside all which, merchandise is carried so fast by these railroads that stores are filled rapidly, innocent tradesmen have to pay storage whether they want the goods or not, and things are made too cheap. Then railroads would occupy space. Agriculture and farming would be stopped, and the good people who now carry goods in boats, or on their backs over the mountains, would be deprived of their livelihood. There is no doubt that canals are much better than railroads, and the wisdom of the holy Confucius must be respected."

A FRENCH LADY-PHYSICIAN.—Madame Bres, who was received, this last June, into the Faculty of Medicine of Paris, is the first French lady who has taken such a step. She passed all her examinations in a most creditable manner, and M. Wurtz, the president of the examining board and dean of the faculty, addressed her in the following terms: "Madame, you have not only raised women from the secondary position they have held in medicine, but your thesis is one of the best that the faculty of Paris has ever received, and it will be consigned with honor to its archives." The title of the thesis is "La Mamelle et l'Allaitement," a very appropriate subject for a doctress; it is treated in an anatomical, a chemical, and a physiological point of view.

TREATMENT OF TYPHOID FEVER.

Dr. George Johnson, in the London *Practitioner*, takes the ground that in the treatment of typhoid fever careful nursing and feeding are of primary importance, while, as a rule, no medicines of any kind are required, and when not required they are often worse than useless. Diarrhœa is a less frequent symptom than before this plan

was adopted, and when it does occur it is far more tractable, while tympanitic distension of the abdomen is a rare event. The mischievous opiate enemata and the torturing turpentine stupes have disappeared together. He believes that one of the main reasons why there is less diarrhœa than formerly is the careful abstinence from the employment of irritating drugs of all kinds. As a rule, a fever patient at "King's" has the "yellow mixture," which is simply colored water; and, except an occasional dose of chloral to procure sleep, and a tonic during convalescence, no active medicines of any kind. These patients are fed mainly with milk, with the addition of beef tea and two raw eggs in the twenty-four hours, and wine or brandy in quantities varying according to the urgency of the symptoms of exhaustion, especially in the advanced stages of the disease, but in many of the milder cases, and especially in the case of children, no alcoholic stimulants are required from the beginning to the end of the fever, and when not required they are of course, says Dr. Johnson, best withheld. He gives no irritating drugs of any kind, and has no doubt that the comparative infrequency of severe and obstinate diarrhœa amongst his typhoid fever patients during the last few years is particularly attributable to the discontinuance of mineral acid treatment.

THE TREATMENT OF DIARRHŒA.

In a paper in Virchyw's *Archiv*, Dr. Hartsen observes that diarrhœa of all sorts goes along with an irritable state of the intestinal canal, and any increase of this irritability is to be carefully avoided. He considers that the more usual astringents are, in addition, irritants; and he instances among them the salts of lead, zinc, and bismuth. In all cases, soothing means should first be adopted; and of the warm applications to the abdomen, in the form of bread poultices, or fomentations, are perhaps the best. The chief medicine recommended is opium, which soothes, but, in large doses, interferes with digestion. If the diarrhœa be so violent as to hinder the absorption of opium introduced into the stomach, then morphia should be injected subcutaneously. Of equal importance is the diet. If the person be strong, everything, both solid and fluid, should be withheld; but where this cannot be done, the food should be of the lightest and simplest. The author especially refers to rice and arrowroot as simple vegetable diets, while any animal food given should be free from fat. Milk should not be too much used, and in any case should be boiled.

TAR IN BRONCHIAL CATARRH AND WINTER COUGH.

In a note sent to the *British Medical Journal*, Drs. Sidney Ringer and Wm. Murrill state that in the treatment of these complaints they have employed tar in two-grain doses, made into a pill, every three or four hours. From October to January, inclusive, its effects were watched on twenty-five patients, whose ages varied from thirty-

four to seventy. All these patients had suffered several years from winter cough during the whole winter.

Each attack of the paroxysmal and violent cough lasted from two to ten minutes, recurring ten or twelve times in the day and breaking their rest at night. Expectoration was abundant, frothy, and purulent. Breathing was short on exertion, but most could lie down at night without propping. These patients usually began to improve from the fourth to the seventh day; the improvement rapidly increased, and in about three weeks they were well enough to be discharged. The improvement was so decided that even those patients who, in previous years, had been confined to the house during the whole winter, returned to their work. On discontinuing the tar, relapses often occurred in a week or two, but on readministering the medicine relief was again obtained.

BROMIDE OF POTASSIUM IN WHOOPING COUGH.

Dr. W. Smith, in the *British Medical Journal*, says: There is at present a generally diffused epidemic of whooping-cough, and I think it may be useful to suggest a remedy which I have found beneficial—bromide of potassium. It allays the violence of the paroxysms, and cures in a few weeks—sometimes less.

BICARBONATE OF SODA IN TOOTHACHE.

Dr. Dyce Duckworth contributes a short memorandum on this subject to the London *Practitioner* for April. He was called on to treat a case of very severe toothache, and tried various ordinary remedies, including chloroform and carbolic acid, without any benefit to the patient. He then remembered having read that the pain might be relieved by holding in the mouth a solution of bicarbonate of soda. He at once gave the patient half a drachm in an ounce of water, and to his astonishment the pain ceased immediately, and complete relief was secured. He thinks that, as the remedy is so simple and the disease so distressing and often intractable, this treatment may be worthy of notice and of imitation.

A COMMON CAUSE OF APOPLEXY.

In an able article on apoplexy, in the *Popular Science Monthly*, Dr. J. R. Black gives the following hint to brain-workers:

“A middle-aged physician said one day to the writer: ‘As I was walking down the street after dinner I felt a shock in the back of my head, as if some one had struck me; I have not felt well since. I fear I shall die, just as all my ancestors have, of paralysis. What shall I do?’ The answer was, ‘Diminish the tension on the blood-vessels, and there need be no fear of tearing them in a weak place.’ Now, this expresses in plain terms the exact cause of apoplexy in the great majority of instances; and it is one, too, which every one has it in his power to prevent. A blood-vessel of the brain has lost some of its elastic strength; food is plenty, digestion is good; blood is made in abundance, but little is worked off by exercise; the ten-

sion on every artery and vein is at a maximum rate; the even, circuitous flow is temporarily impeded at some point, throwing a dangerous pressure on another; the vessel which has lost its elastic strength gives way. blood is poured out, a clot is formed which, by its pressure on the brain, produces complete unconsciousness. This is the apoplectic stroke. It will be perceived that there are two leading conditions upon which the production of the stroke depends—a lessened strength in the vessel, and an increased tension on it."

CARBONIC OXIDE IN TOBACCO SMOKE.

Dr. Otto Krause, in *Dingler's Polytechnic Journal*, states that he finds a considerable quantity of carbonic oxide constantly present in tobacco smoke, and that the after effects of smoking are principally caused by this poisonous gas, as the smoker never can prevent a part of the smoke from descending to the lungs, and thus the poisoning is unavoidable. He is of opinion that the after-effects are all the more energetic, the more experienced the smoker is, and he thus explains the unpleasant results of the first attempts at smoking, which are generally ascribed to nicotine alone.

WORK AS A REMEDY.

Dr. Dio Lewis says: A lady has just left our rooms whose case illustrates an important idea. Ten years ago she was an invalid. Her malady was obstinate, and at the end of a year's treatment a consultation resulted in the opinion that her case was cerebro-spinal irritation, from which she would probably never recover. Six years ago her husband died. His estate proved insolvent. The wife engaged in an active occupation to support her three children. In a year she was well, and has remained so ever since.

There are two millions dyspeptics in America. Nine in ten of them could be cured by work.

A wealthy clergyman from a neighboring State assured us that he had spent eight years and thirty thousand dollars in seeking a cure for his dyspepsia. He had travelled everywhere and consulted all sorts of doctors. We are afraid he will never forgive us for telling him that six months' hard work would make a well man of him.

DIPSOMANIA.—

Some extraordinary instances of the insatiate desire, or rather morbid impulse, to drink are mentioned by Dr. George Burr, in a recent paper on the "Insanity of Inebriety." Dr. Bush records a case of an habitual drunkard in Philadelphia, who, when strongly urged by one of his friends to leave off drinking, replied, "Were a keg of rum in one corner of a room, and were a cannon constantly discharging balls between me and it, I could not refrain from passing before that cannon in order to get at the rum." One of the cases described by McNish, in his "Anatomy of Drunkenness," also illustrates this feature. A friend of the subject of it painted to

him the distress of his family, the loss of his business and character, and the ruin of his health, to which he replied, "My good friend, your remarks are just; they are indeed too true; but I can no longer resist temptation. If a bottle of brandy stood at one hand, and the pit of hell yawned at the other, and I were convinced that I would be pushed in as sure as I took one glass, I could not refrain." The late Professor R. D. Mussey, of Cincinnati, relates another case: "A few years ago a tippler was put into an almshouse in this State. Within a few days he had devised various expedients to procure rum but failed. At length, however, he hit upon one which was successful. He went into the wood-yard of the establishment, placed one hand upon the block, and with an axe in the other, struck it off at a single blow. With the stump raised and streaming, he ran into the house and cried, 'Get some rum! get some rum! my hand is off.' In the confusion and bustle of the occasion a bowl of rum was brought, into which he plunged the bleeding member of his body, then, raising the bowl to his mouth drank freely, and exultingly exclaimed, 'Now I am satisfied.'" Dr. J. E. Turner relates a case of a gentleman who, while under treatment for inebriety, during four weeks secretly drank the alcohol from six jars containing morbid specimens. On asking him why he had committed this loathsome act he replied, "Sir, it is as impossible for me to control this diseased appetite as it is for me to control the pulsations of my heart."

REMEDY FOR COLDS.—According to the same French authority, powdered camphor, sprinkled with tincture of iodine, and inhaled by the nostrils, constitute one of the most prompt and certain remedies for coryza, or "cold in the head."

IF HE SAID HE DID, HE DID.—

The little story I am going to tell you happened just before the war, when every one was very, very busy. Soldiers were enlisting and going away from almost every home in the land. One young man had volunteered, and was expecting daily to be ordered to the seat of war. One day his mother gave him an unpaid bill, with money, and asked him to pay it. When he returned home that day, she said:

"Did you pay the bill?"

"Yes," he answered.

In a few days the bill was sent in a second time.

"I thought," said she to her son, "that you paid this?"

"I really don't remember, mother; you know I've had so very many things on my mind."

"But you said you did."

"Well," he answered, "if I said I did, I did."

He went away, and his mother took the bill herself to the store. The young man had been known in town all his life, and what opinion was held of him this will show.

"I am quite sure," she said, "my son paid this some days ago; he has been very busy since, and has quite forgotten about it; but he told me that day that he had, and says if he said then that he had, he is quite sure that he did."

"Well," said the man, "I forgot about it, but if he ever said he did, he did."

Wasn't that a grand character to have? Having once said a thing, that was enough to make others believe it, whether he remembered it or not. I wish all the boys in our land were as sure of a good reputation.—*Christian Weekly*.

GIRLS.—

Artemus Ward never said a wiser thing than this: "I like little girls, but I like big girls just as well." These laughing, happy creatures—the sad, the grave, the gay—all have their separate and peculiar charm for the children of men. From the school-girl of fourteen to the more mature damsel, we love them all; and it is wise that we do so. The world would be a desert without them; and I have no patience with a man who can wilfully say that he has never been entangled in the meshes of sunny hair, or felt his heart thrill at a look from a pair of laughing eyes. In the first place, when he makes a statement of that kind, he will find difficulty to make believers in it. Men, from Adam's time, have been moulded by the "weaker sex."

Weak! Samson, the strong, man of all, lost his strength in the lap of a woman. And so it is with all. We love them for their many graces, for their musical voices, for the beauty God has given them, and because they are weaker than we are, and appeal to us for protection. The touch of a delicate hand, the mellow tones of a girl's voice, the tender glance of beautiful eyes—all these have their power. Man's inherent chivalry teaches him that these are given for his good, to restrain his wilder impulses, and to make him better, purer, nobler. They furnish to the young man an incentive to labor, and point out to him the better path which his feet ought to tread. They enchain the wildest and most untamable of our race, and teach them to take delight in the purer social pleasures. Many a man who has gone astray has been reclaimed by his love for one of these dear creatures, and has lived a nobler life thereafter for her sake. We say, "God bless 'em every one!"

SLEEP AND HOW TO SECURE IT—

Mr. Frank Buckland, in a recent article on this subject in *Land and Water*, takes the ground that it is natural for man, like other animals, to sleep soon after eating. The following passage will be endorsed by all who are in the habit of after-dinner naps or late suppers.

The human frame cannot do without sleep. I believe the reason is that the mysterious property—for want of a better name we call it

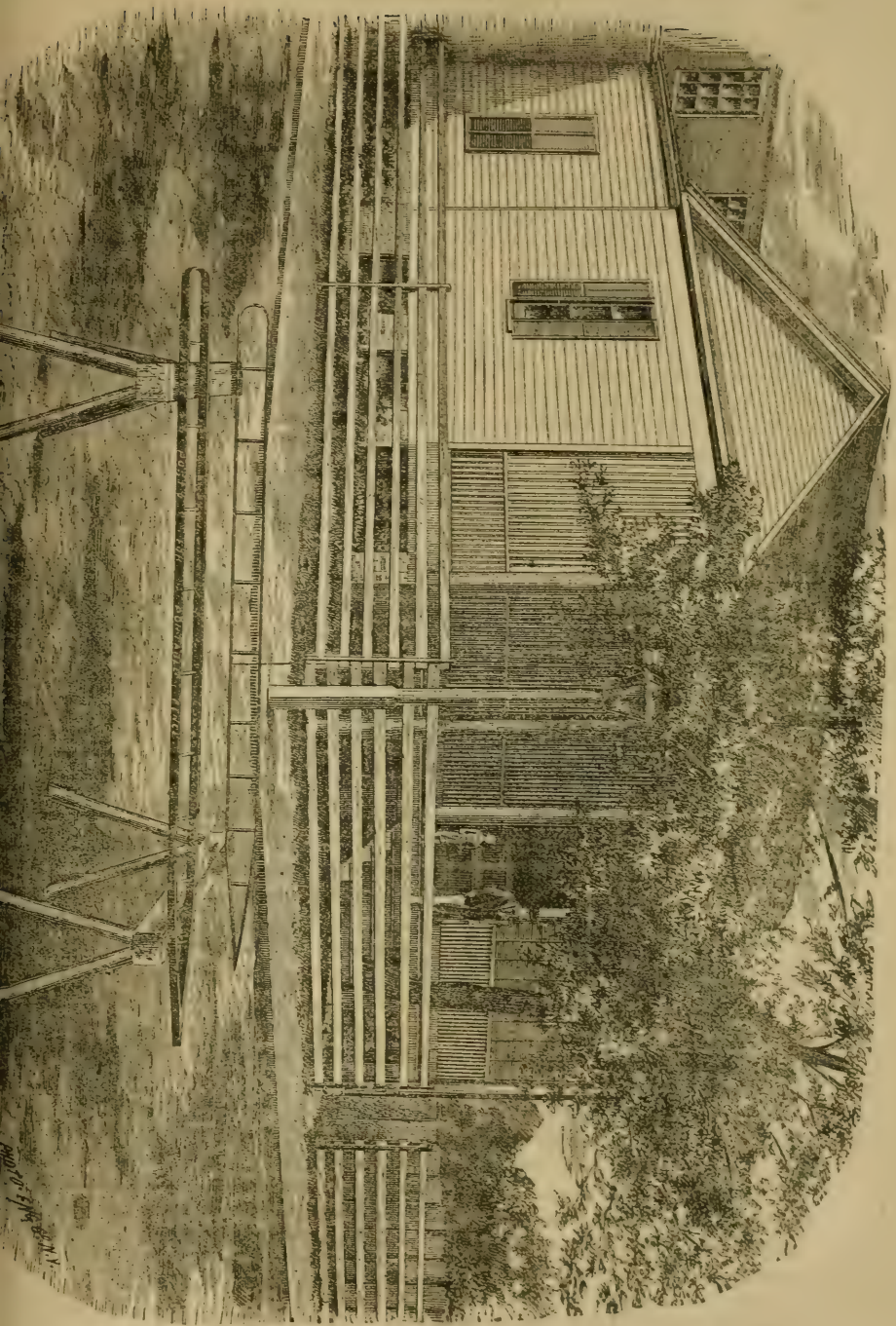
"vital energy"—gradually leaks out during the day. During sleep, the machinery of the body, especially the brain, becomes recharged with it. The cause of not being able to sleep—I write now of people in good health, and hard workers with their brains—is that the brain cannot, so to speak, "go down," but it continues to act, more or less. My father, when writing the Bridgewater Treatise, had his own way of working. He was an excessively busy man during the day, and had only the night hours in which he could write. He generally dined at seven o'clock, and immediately after dinner went to sleep for two or three hours. He then got up, and worked on till two or three in the morning. Just before retiring to rest, he took some light pudding, or a sandwich, with cocoa or milk. Thus he always slept well, as the blood was diverted from the brain to the stomach.

I have no hesitation in saying that the proper thing to do is to go to sleep immediately (or at least very soon) after the meal of the day. All animals always go to sleep, if they are not disturbed, after eating. This is especially noticeable in dogs; and the great John Hunter showed by an experiment that digestion went on during sleep more than when the animal was awake and going about. This is his experiment: He took two dogs and gave them both the same quantity of food. One of them was then allowed to go to sleep, the other was taken out hunting. At the end of three or four hours he killed both of these dogs. The food in the stomach of the dog which had been asleep was quite digested: in that of the one which had been hunting, the food was not digested at all.

IMPROVED STARCH.—A beautiful finish can be given to articles to be starched by taking one-fourth of a pound of starch, and working it over and kneading it with a little water, then placing five or six pints of water in a pan, and adding to this a very small quantity of powdered borax, a small piece of sugar, and a fragment of white wax about the size of a hazel nut, and heating the whole sufficiently. This water is then to be added to the starch, with continual stirring, mixing the two together until the whole is as thick as is convenient for application. If the articles are to be made quite stiff, the strength of the starch may be increased two or three fold.

LEARN FROM BABY.—

Jack heard a very strong young farmer say one day that his baby brother had taught him a capital lesson—that was to *stretch* himself often. Baby did it for some wise reason, he knew; so he had followed the example. Stretching makes you grow, makes you supple and active, and is all together a good thing. Follow the baby's plan, my dears; stretch your arms, legs, neck and body for a few moments, morning, noon and night, until further notice.—*St. Nicholas.*



Editorial Department.

NOTES FOR THE MONTH.

The month of August was named in honor of Augustus Cæsar. We do not know that he was a patron of agriculture, but we know that he was a kind patron of the farmer poet of Italy, Virgil, and that he spared to him his farm, when he was confiscating all the lands in Mantua, for the benefit of his soldiers.

TAKING CARE OF OATS.

There is as much to be done in this month in taking care of the crops already raised, as in cultivating those in the ground, or in starting new ones. If oats have not been secured, lose no time in housing or stacking them, or in baling them as hauled from the field. If intended for market, we prefer baling them, and it saves time and loss of grain by shattering, to bale as hauled from the field. Use No. 12 wire, and six moderate sized, seasoned sticks, if procurable. We say moderate size sticks (seasoned), because we think much imposition in this matter has been practiced on the consumer, sometimes, no doubt, unintentionally. We had occasion some time since to weigh the sticks put around some bales of straw. They were large, green oaks, and weighed to the bale, from eighteen to twenty pounds. The consumer in such cases is justifiable in refusing to purchase. The winter oat this year has yielded well, and we have no doubt on our minds now that it is a more profitable crop than wheat. We have cut and baled the present season, from four acres of land, 10,500 pounds of winter oats. These at \$1 per hundred, which we have no doubt about obtaining by September or October, will amount to \$105. Now, this land has not been manured for eight years, when it was in strawberries, and is not rich, capable of producing six or seven barrels of corn, and not more than fifteen bushels of wheat in the most favorable seasons. About one-half of it was much infested with wire grass. The oats were seeded the 14th of October, and were not thick enough on the land, only one bushel to the acre being seeded. They did not come up well on account of the dry season last fall, and in the winter looked as if they were so thin as necessarily to produce a small crop. Besides this, being near the house, they were depredated on the whole season by fowls. If they had been seeded the 1st September, and one and a half to two bushels put to the acre, they would, we confidently think, have yielded one-third more. If the winter oat stood the last winter well, as cold as it was, we may well expect them to stand any winter in our latitude., and if seeded the last of August, or first of September, we believe it would prove one of the most certain, if not the most certain crop, the farmer can raise. On the other hand, we consider wheat the most uncertain crop produced in our latitude.

SEEDING OATS.

We advise then that winter oats be seeded the last of this month or first September, one and a half to two bushels per acre, in the standing corn. Run the cultivator twice in the row, sow the oats, and cover with the cultivator, or if the land is grassy, run the turning plow through the centre of the row, lap the dirt on this from each side, drag down with the cultivator, then sow, and cover with the cultivator. The hoe hands must then follow, and chop between the hills of the standing corn, to cover the oats there.

GETTING OUT WHEAT.

As before advised, get out wheat as soon as possible, and sell, for the first price is generally the best, and much will be saved from waste, shrinkage, and probably stealage in some cases.

FALLOWING

Should be commenced this month for wheat, or winter oats, and prosecuted every opportunity, when the condition of the ground, and other things will permit.

SEEDING CLOVER AND GRASSES.

We omitted to say in connection with the seeding of winter oats, that clover, orchard grass, or timothy, or tall meadow oat grass, might be very advantageously seeded the last of this month along with the oats. As at present advised we prefer to sow clover, one and a half gallons; orchard grass, one bushel; and tall meadow oat grass, one bushel to each acre.

TURNIPS.

This is the principal month for putting in the turnip crop. In the first part of the month (if not sown last July) from 1st to 15th August, sow "Norfolk," "Globe," and "Aberdeen." and "Red Top." As a general thing the "Red Top" should be sown a little later than the former, as it matures earlier, and does not keep so well. "Seven Top," for salad, sow last of the month, though many now are sowing "Norfolk," or "Globe," the salad being much better than the "Seven Top." The latter requires little or no protection in the winter, while the others do. Turnips may be drilled or sown broadcast. The former is the most certain mode. After the land is well fallowed and dragged, throw two furrows together two and a half feet apart, flatten these down with the back of the drag, or with hoe or rake, and drill with hand, or with drilling machine. The land should be made rich for turnips, either by superphosphates, stable manure, or bone flour—the latter is, however, generally too slow. The custom which prevails in the country of enriching the land with cows penned on it, answers a very good purpose. If sown broadcast, which is the most economical plan, it will be necessary to go over and pull up the largest weeds and grass with the hand. The principal objection to broadcast sowing is the difficulty of getting the seed evenly distributed, and unless thinning is done, they will, in some places, be much too thick.

POTATO ONIONS

May be put out the last of this month, particularly if they are disposed to rot.

ASPARAGUS

Must be kept clean of grass, and the dirt be thrown back to it, if this has not been done since it was thrown from it last month.

STRAWBERRIES

Must be frequently worked this month, with hoe and cultivator frequently run through them. They must be kept clean by constant working, or the labor will be increased if they get grassy.

Well, we may finish the work for the month early if we will "hurry up," and then let us take that little promised recreation. Before closing, let us congratulate the farmers on the bright prospects of good crops the present year. The wheat throughout the Union, with the exception of California, is said to be a fine crop. The oat crop is a good one, and the corn and tobacco is very promising, and, unless a drought intervenes, the yield of each will be large. The hay crop is said to be a short one generally. Should the abundant crops produce lower prices, the farmers have the consolation of knowing that the prices of almost all they have to buy are coming down, and will probably rate still lower.

THE STATE AGRICULTURAL SOCIETY.

We publish in this number of the *Planter and Farmer* an article from the President of the State Agricultural Society, which gives us the occasion to say something, as it always affords us pleasure to do, in regard to the affairs of the Society. Probably, the State is indebted in a larger extent to the labors and expenditures of this organization, under the management of its efficient officers, than is generally supposed or acknowledged.

The people were impoverished by the war, and agricultural and other interests were prostrated beyond any precedent in the history of nations. Adverse seasons in many sections have continuously prevailed to the present time; and yet the people, borne down by their losses and the burden of old debts, have rallied to an extent that the fruits of a few propitious seasons will afford a permanent relief. Under a judicious system of Immigration urged by the Society, the unoccupied lands will be filled up with thrifty farmers, mines will be developed, factories extended and improved, and the wail of repudiationists will be hushed. The Society having fortunately preserved from the calamity of war the bulk of its investments, recommenced its labors six years ago, and year after year its Fairs have disclosed a gradual increase in products of the field, garden, orchard, stable and stock-yard. The distribution of from six to ten thousand dollars in premiums each year has been no small incentive to the stock-breeder and intelligent farmer; and we hope the time is not far distant when Virginia will not be behind any of her sister States in respect to a generally diffused prosperity amongst her citizens. Ten years ago her pastures and stables were stripped of almost every living animal, but now she may boast that they are re-stocked with as valuable thoroughbred cattle, horses and sheep, as can be found in any country. Her great staples, tobacco, corn and wheat, are advancing in production, notwithstanding the first named is burdened with an unreasonable, if not unjust, tax of six to eight millions of dollars per annum to the United States Government. Now, we say, that we are indebted, to a large extent, to the State Agricultural Society for this state of things, and we hope that every farmer, merchant and manufacturer in the State will become a life member of the Society, and thus increase its influence and means for doing good. The approaching Fair, we have reason to believe, will present a grander display of people and products than any former one, and every farmer, or citizen, of any profession, will be amply paid for time and money in attending it. And more than this: each should feel it his duty and privilege to contribute something to the exhibition in its various departments, and if not in animals, or articles, then in written essays on subjects connected with practical agriculture, &c. This collision of mind and skill will ensure progress, which will tell alike on individual and State prosperity.

POMONA GRANGES.

The Master of the State Grange will be at the following places at the time appointed to organize Pomona Granges and instruct deputies in the work of the fifth degree. The deputies of the judicial districts will be expected to be present, and as many members as possible are requested to be in attendance. The installations will be public: Farmville, August 4th; Glade Spring, August 6th; Wytheville, August 9th; Christiansburg, August 11th;

Lynchburg, August 13th; Staunton, August 16th; Winchester, August 18th; Alexandria, August 16th.

Pomona Granges will be composed of Master and Past Master and their wives who are matrons, and three fourth degree members from each subordinate Grange, who may be elected thereto. Delegates will be required to present a certificate of election under seal of the Grange, attested by their respective secretaries. Each Grange represented is required to send by their delegates the fee of \$2. This fee is in full of all State charges.

THE PLANTERS' CONVENTION.

The planters of Virginia have decided to hold a Convention at Burkeville on Wednesday, the 11th day of August, and it is desirable that every county that produces tobacco, shall send representatives. The prime object of the Convention is to consider the subject of tobacco inspection--to harmonize the views of planters, and to decide what changes in the law are necessary to foster and protect this important industry.

This subject has occupied much of public opinion for several years, and engaged the attention of several recent Legislatures. There is considerable diversity of opinion among planters, and more between them and the trade. The latter petitioned the last Legislature to abolish state inspection of tobacco as a useless and oppressive burden to production, but the planters in many of the largest tobacco producing counties in the State held meetings, and petitioned for the retention of the law, with such changes and modifications as seemed to them desirable. The Convention, we presume, is to decide upon these, and to unite in petitioning for such changes and reforms in the law as are desirable. The decision of the Convention, if harmonious, will be potential for good.

Let county meetings be held to appoint delegates, and where these cannot be held, district meetings and the Granges should select.

We had the promise of an article on this subject from Maj. R. L. Ragland, who understands the subject probably better than any man in Virginia, having fought this question of tobacco inspection for the past two years in the Senate in the interest of the planters, but he informs us that sickness has prevented him from doing so. We hope, however, that he will be able to attend the meeting at Burkeville, that the Convention may have the benefit of his experience and counsels. No one has more zealously and efficiently worked for the interest of the tobacco grower than has Maj. Ragland.

TEN GOOD HINTS.

The following pithy code of newspaper by-laws is the best we have ever seen:

1. Be brief; this is the age of telegrams and short-hand.
2. Be pointed; don't write all around a subject without hitting it.
3. State facts; don't stop to moralize; it's drowsy business; let the reader do his own dreaming.
4. Eschew prefaces; plunge at once into your subject, like a swimmer in cold water.
5. If you have written a sentence that you think particularly fine, draw your pen through it; a pet child is always the worst in the family.

6. Condense; make sure you really have an idea, and then record it in the shortest possible terms.

7. When your article is complete, strike out nine-tenths of the adjectives; the English is a strong language, but won't bear too much "reducing."

8. Avoid all high-flown language; never use stilts when legs will do as well.

9. Make your sentences short; every period is a milestone, at which the reader may halt and rest himself.

10. Write legibly.

GEORGE WATT.

GEORGE WATT, the plow-maker of Richmond, (whose likeness forms the frontispiece for this number,) was born August 11th, 1815, (at *Springfield Farm*, the battle-ground of the 27th of June, 1862), in Hanover county, Virginia. His father, Hugh Watt, was of Scotch-Irish descent, and a lineal relative of *James Watt*, who first brought steam into practical use. His father was a farmer in independent circumstances. His mother was a native of Hanover county, and was a granddaughter of John Austin, to whom the crown made some very extensive grants of land principally in that county.

George was the youngest of five children. At the age of fifteen he was taken from school and put with Wm. Smythe, an extensive dealer in china-ware in Richmond. But he was not pleased with this vocation and returned to the farm at the end of six months. After remaining with his father six or eight months, he was apprenticed to his brother-in-law, John Haw, of Hanover county, to learn mechanics. Mr. Haw was engaged in building machinery of all kinds, and houses, and also had a large foundry and blacksmith shop. George took a general interest in every department of business, and after five years of diligent service, asked to be released from his remaining time, which request was granted cheerfully.

He then went West and afterwards South, where he engaged in business with his brother.

In 1840, he finally went into the business of manufacturing plows.

In 1842, he commenced the manufacture of what has since become famous under the name of the Cuffbrace plow.

In 1843, he moved from Alabama, where he had been living for some time, and having formed a partnership with his brother-in-law, with whom he had served his apprenticeship, he went into the manufacture of plows and building of machinery. They had their factory at Haw's shop in Hanover county.

In January, 1846, he removed to Richmond, and here commences a career so intimately interwoven with the successful manufacture of plows for the use of Virginia and the South, that to write it out minutely would be to give the history of almost every valuable improvement in cast-iron plows for nearly thirty years.

Mr. Watt has, from time to time, made improvements on his plow, which, all combined, make it now, beyond all question, one of the best, if it is not the very best cast-iron plow made.

His progress toward the present perfection, was of course gradual—almost every year saw some improvement made, till in 1867 he made what is now known as the Watt Plow—combining all the excellence of his former inventions, and adding some very valuable improvements.

In 1870, the broad throat improvement was added. There are many peculiari-

ties about the Watt Plow, which distinguish it decidedly from all others, both in the form of different parts and the method of putting them together. The obliqueness of the mould-board, and simple method of regulating the depth and width of furrow, make it not only the lightest running plow, but also the most easily regulated.

It is hardly necessary to enter into a complete description of the plow, for they are in every neighborhood, and farmers can see them for themselves. The points of excellence are cheapness, durability, ease of draught, both to team and plowman, perfect adjustability, either as to depth or width of furrow, freedom from choking, burial of filth and pulverization of soil.

These plows have been introduced everywhere throughout the South, and give entire satisfaction wherever used. Mr. Watt is still actively engaged in their manufacture in partnership with his son-in-law, Manfred Call. The demand for the Watt Plow is steadily and rapidly increasing, and the firm is doing a heavy and lucrative business.

Personally, Mr. Watt is above medium height, with a pleasant, open countenance, upon which good nature and firmness are equally impressed. He is a man of uncommonly strong natural sense; impulsive in his feeling, a firm friend and uncompromising opponent; scrupulously honest in all his dealings, and bitter in his denunciations of all who fail to come up to his high standard of honesty. He is enthusiastic in his business and believes he knows more about plows than any one else—an opinion, by the way, which a very large class of our people heartily endorse. If men are to be judged by the amount of good they do in life, George Watt will rank very high among the honored sons of Virginia.

TO OUR PATRONS.

With zeal, energy, and liberal expenditure in procuring valuable contributions and handsome and useful illustrations, we confidently expect to render the *Planter and Farmer* still more deserving of the liberal patronage that it has received in the past. Virginia and the other Southern States have so many interests in their large territory and varied conditions, that it would be unjust to devote the journal to any one or two to the exclusion of others. The farmer, the planter, the gardeuer, the fruit grower, the stock raiser, the manufacturer, the miner, have all a right to be considered in our table of contents. Of course, no one supposes that any one person is capable of treating all these subjects properly; therefore, we must look for information to those whose thorough education and long experience have been directed to special objects. In this connection, we wish to say that we are always anxious to hear from our readers upon any subject which particularly interests them, believing that when a man is in earnest something can be learned from what he has to say.

We desire to set apart a small portion of the journal to family reading, which shall be carefully guarded against anything objectionable, and which, we hope, will add to its value and make it acceptable to the *whole household*.

We say to our readers, the *Southern Planter and Farmer* is *your* paper as well as ours, and you are all equally interested in its success; and we, therefore, have no hesitation in asking that you will take such steps as will insure it—that is, to pay promptly the small subscription price that is due, to give it your influence in obtaining new subscribers, and the benefit of your experience in any

matters relating to agriculture, horticulture, and kindred pursuits. The single effort of each subscriber could readily double the circulation of the journal, and we promise that our patrons shall have the benefit in full of our increased prosperity. If the 10,000 copies which we send out this month are only circulated among your friends, after you have read them, with a hint that they ought to subscribe, we have not a doubt that our subscription list would be doubled in a few months.

WHO WILL DO LIKEWISE?

The following gentlemen will please accept our thanks for their influence and aid in extending the circulation of the *Planter and Farmer*. It only needs the combined influence and aid of our present subscribers to make the *Planter and Farmer* not only the largest circulated paper in the country, but the best. If the *ten thousand* farmers who will receive this number will only show it to their neighbors, and urge upon them to subscribe, our subscription will, in a month, be doubled. We are indebted to the following gentlemen for the following number of subscribers:

D. L. Stephens, 6; C. H. Jones, 12; D. C. Brady, 5; Wm. Chitwood, 8; J. A. Cunningham, 5; F. A. Luck, 5; M. D. Cowherd, 3; A. Graves, 5; T. J. Adams, 5; T. G. Lumpkin, 5; H. W. Burgwin, 5; Dr. J. T. Dunette, 6; J. W. Whitley, 5; Dr. T. W. Gouldin, 6; J. L. Shelton, 9; L. Sheffield, 5; A. O. Lee, 14; P. T. Woodward, 5; L. S. LaPrade, 5; O. L. Ligon, 5; Abner Fuqua, 5; Thomas J. Adams, 5; W. F. Smith, 10; W. H. Gills, 5; H. M. Stephens, 9; M. H. Bernard, 9; John S. Apperson, 9; James Harris, 6; E. W. Brooking, 18; E. H. Wood, 8; C. B. Coiner, 5; John D. Stone, 5; S. R. Waring, 5; H. C. Bost, 5; W. D. Stone, 6; William M. Blackwell, 5; John A. Brumbaugh, 5; William C. Tate, 7; Robert A. Blackwell, 8; Dr. C. R. Cullen, 12; M. H. Garland, 9; M. Branch, 5; J. W. Schink, 5; George S. Norman, 5; Wm. D. Stone, 6; J. W. Goodman, 11; John Fredick, 5; J. K. Forrer, 5; W. W. Smith, 7; C. H. Moorman, 8; Isaac A. McIrwin, 5; C. H. Chilton, 7; T. A. Hatcher, 5; W. Holman, 8; W. C. Tate, 5; C. M. Adkinson, 5; John W. Peyton, 5; S. R. Moore, 5; W. A. Love, 7; J. M. Rice, 6; J. M. Leftwich, 5; William F. Lockett, 5; E. B. Hilton, 5; Thomas L. Catlett, 7; M. H. Garland, 10; P. H. Adams, 5; J. E. LaPrade, 7; J. W. Chinn, 5; E. B. Spencer, 6; E. C. Wilbourn, 5; P. T. Woodward, 5; J. G. White, 9; H. B. Harnsberger, 5; J. W. Schenk, 7; John J. Ansell, 6; Cyrus Brown, 5; John C. Ward, 5; J. M. Spiller, 6; J. E. Lazenby, 10; W. H. Peyton, 6; John R. Farrer, 5; J. D. Rogers, 6; K. Shumate, 5; Joseph K. Bland, 6; G. Bear, 5; Thomas E. Pullen, 5; George W. Dawson, 9; James T. Woods, 5; Dr. E. T. Adams, 13; F. Sanders, 5; P. J. Kemper, 5; John W. Aiken, 19; C. M. Zeegler, 23; Ro. L. Poindexter, 7; S. G. Bernard, 8; A. W. Abraham, 6; J. T. Cawthorn, 6; H. M. Fowlkes, 5; J. H. Shelton, 7; P. L. Ligon, 7; P. L. Blankenship, 5; L. C. Blankenship, 6; E. M. Quillen, 5; D. E. E. Brady, 6; H. C. Lovitt, 5; W. H. Peyton, 8; Wm. Powell, 9; D. L. Stephens, 5; J. H. Featherstone, 6; A. J. Brown, 5; Thos. T. Arnold, 8; Jas. F. Bland, 6; Thos. F. Rives, 5; Wm. A. Mohler, 5; R. G. Handen, 5; H. L. Blanton, 6; Skinquarter Grange, 7; E. L. Nuckols, 5; R. T. Jeter, 5; L. B. Brown, 5; C. H. Chilton, 7; John F. Walton, 6; T. R. Covington, 5; R. Binford, 11; C. A. Shuman, 10; Putnam Owen, 5; Sharpe Carter, 6; Joseph F. Deans, 15; F. N. Maxey, 5; G. N. Thrift, 5; N. A. Gregory, 7; T. P. Lilly,

5; Jas. K. Smith, 5; W. Haynes, 6; C. S. Morton, 5; J. R. Jones, 5; J. M. Spiller, 6; S. G. Bernard, 5; H. Handley, 5; J. P. Gayle, 5; A. W. Tinsley, 10; H. W. Burgwin, 8; J. C. Arnn, 8, Jonas Hackman, 5; J. A. Logan, 5; W. G. Friend, 11; M. Dent, 5; G. T. Croxton, 5; S. McD. Gold, 5; C. T. Moseley, 5; Geo. F. Beale, 5; A. E. Stark, 7; T. J. Stratton, 6; S. M. Step-toe, 6; W. H. C. Lovett, 5; A. G. Spratley, 5; W. L. Doss, 5; Wm. P. Courtney, 6; John Q. A. Kelly, 5; T. P. Taylor, 5; M. Graybill, 6; R. M. Kirby, 5; Jas. Yancey, Jr., 6; Mr. Bagby, 11; D. S. Tucker, 14; R. G. Haden, 6; Geo. W. Dawson, 7; R. C. Phillips, 5; W. W. St. Clair, 6; W. T. Pugh, 5; P. Smith, 6; S. W. Goulam, 5 Joel L. Preston, 5; John L. Hart, 5; J. W. Johnson, 5; T. H. Massey, 5; S. Carter, 5; Dr. L. W. Carter, 5; G. N. Thrift, 5; F. A. Luck, 13; B. F. Kidd, 7; L. H. Stern, 9; Wm. Holman, 6; Col. J. A. Gibson, 5; C. H. Barron, 5; W. R. Mason, 15; D. M. Burgess, 5; N. M. Tandy, 7; Wm. M. Blackwell, 5; D. C. E. Brady, 7; J. W. Diggs, 6; S. W. Walkup, 6. Total, 1,273.

DR. NICHOLS' PATENT PORTABLE FENCE.

[We are indebted to the proprietors of the *Rural South Carolinian* for the following letter, and the stereotype on page 469. The *Rural Carolinian* is one of the best agricultural journals published North or South. We recommend it to our subscribers as being more than worth its subscription price—\$2 per annum. Ed. P. & F.]

The following letter from Dr. Edgar G. Nichols, of Beaufort, S. C., will explain itself, and, in connection with our frontispiece, answer the questions of numerous correspondents. Those requiring further information can communicate directly with the patentee:

BEAUFORT, S. C., May 14th, 1875.

D. H. Jacques, Esq.:

Dear Sir,—At the request of Mr. Robt. Chisolm I send you to-day, per steamer "Pilot Boy," one of my patent posts for portable fence: also a stereotype of a fence already built.

These posts are seven feet long, weigh sixteen pounds each, are made of wrought iron, and painted with Asphaltum. They are set into the ground two feet, a hole of the shape of the bottom part of the post having been made with a crowbar to receive each one; they can be set at the rate of fifty per hour. To fence one acre, forty posts are required: to fence one-fourth acre, twenty. They cost one and one half dollars each; that is, for one quarter acre, thirty dollars. In addition, you want sixty to one hundred and twenty rails, and nothing else—not even a nail. The rails may be poles, three inches diameter, such as are found in most woods, and would cost a farmer next to nothing. But if sawed lumber were preferred, the best size is one and one half by four inches, and twenty feet long. At fifteen dollars per thousand, this, for a cowpen of one-quarter acre, would cost nine dollars. But for a cow, horse, sheep and hog pen, eighteen dollars, because in that case it must be six rails high. So the whole cost cannot be less than thirty dollars, nor more than forty-eight dollars.

The rails will last three or four times as long as in an ordinary fence, because there are no water-holding joints, and the posts will last a lifetime.

A boy of fifteen years can put up the pen alone in two hours, or can take it down and load it alone on a cart, for distant removal.

Respectfully yours,

EDGAR G. NICHOLS.

The headquarters of the National Grange has been removed to Louisville, Ky. Persons desiring to correspond will note the fact.

A VISIT TO "BELMONT STOCK FARM."

Being in Charlottesville a few days since, we called on our friend Maj. S. W. Ficklin, whose fine old mansion is only a few hundred yards from town. This magnificent estate, so familiarly known as the "Belmont Stock Farm," is composed of three tracts, containing over 1,300 acres of land, most of which is well set with old turfs of clover, orchard and timothy grasses.

We have known Maj. F. as a successful breeder of all kinds of pure stock for the past thirteen years, but did not suppose him such a capital farmer until our recent visit. The fact, however, that his son is his active and enterprising manager, may be the explanation of the excellent crops of wheat, corn, and tobacco which we saw rather than the Major, and the credit is likely due to him.

It is of the stock, however, of Belmont Farm of which we wish to speak. Maj. Ficklin raises and keeps nothing but pure short-horn cattle, and has a decided preference for them and their grades to any other. He commenced herding from a purchase of Kentucky cattle, and bought those in '58, and has added more bulls since—some from the best families in Kentucky, and this spring selected some cows and calves at Chicago sales, of the best descents, and has sold probably from eighty to one hundred of both sexes in this time, to stock up the country around with pure bred cattle. He has the Chester White and Berkshire hogs, but his proximity to town has prevented his owning of sheep. His attention to breeding fine horses of the useful type was the result of an early and a life-time extensive use of them. He has bred from old Black Hawk since 1859, who is now in his twenty-sixth year, but he looks comparatively young. In 1866 he imported from France two Percheron Norman stallions and two mares, and the result is being scattered over the country like his cattle and hogs. He has horse stock of all ages from eighty-five to ninety head. None but Black Hawk above fifteen years old, the rest being mainly under five years. He purchased some thorough-bred horse stock at Alexander's annual sale in Kentucky in 1867, and has added others since; Maj. F. does not breed for the turf, but for all useful purposes only. He has also added three Clydesdale colts and he looks to their rearing, with great interest, as they are very popular in their native heath in Scotland, as the farmer's draught horse.

Maj. F. has some twenty brooded mares—a portion of which he works when without colts—he has Black Hawk and his son Alharian (having sold Granite); the thorough-breds are represented by Florist by imported Australian; he has two imported Percheron Norman stallions, Bienveure and the Colonel; one three-year old ditto, two two-year old, and two colts of this year, and some half-breds of the last two springs, and a half-bred stallion (Graybeard) that has been used successfully the two last springs in Orange, and the Colonel this year at Winchester.



During our visit to Maj. Ficklin's he rode us over the farm of Mr. B. H. Brennan, who has recently bought the valuable estates of Alexander Rives, G. C. O'Mohundro, and one hundred acres of T. L. Farrish—in all some twelve hundred acres, which adjoins and compactly forms a splendid estate. We have never seen such magnificent crops of wheat and corn. Mr. Brennan believes in high farming, feeding his land with heavy applications of fertilizers; and by thorough cultivation, he makes his land yield immense crops of corn and wheat, which he thinks will ultimately return him large profits on his investments. Mr. B. has an experienced Virginia manager and uses negro labor, with the best plows, reap-

ers, mowers, and every implement of the best and most durable kind, gotten, as far as practicable, from Harris's Charlottesville machine shops, or through him from the best makers. He seeded upwards of three hundred bushels Fultz wheat last fall, one and a half bushels per acre, on land first plowed in May with three horses, in August harrowed and rolled with heavy clod-crushers; again plowed with four-horse plows and harrowed, and towards seeding time sowed broadcast five hundred pounds of Lister's Raw bone and three hundred pounds of plaster, and harrowed or plowed in, and the first week of October put in the wheat with about one hundred and seventy-five pounds Guanape guano, and rolled the land with four-horse rollers. The parts of his land that was a corn fallow was cleared of the corn, thoroughly plowed, harrowed, clod-crushed, and finished like the other land, and finished in the last week of October; and it was the first to be ready for the scythes and three Champion reapers. The ground having been cleared of all stone and obstacles, they worked to perfection. The heavy fertilization made the crop even, uniform and exact, and the straw, like the crop generally this year, very short. The reapers cut within a few inches of the ground, and the grass and surface looked quite lawn-like. The crop is variously estimated at from twenty to thirty bushels per acre, and the quality superb. Mr. B. tried some dozen quarters of acres with various opposition fertilizers worked into the soil, and the drill seeded over the whole alike, the lines being marked by stakes, and the results showed plainly; but there was no separate measurement of yield. Mr. B. is grading and paving his farm road, and improving his farm by finishing up to grass each year as he goes. He has a field of one hundred acres in corn, on which he sowed by plaster sowers ten tons of Turner's Excelsior, and the promise is magnificent; whilst a fine field of creek bottom promises a grand crop.

So far Mr. B. has not attempted to raise much stock, though he has of Mr. F.'s stock of Percheron three half-bred colts of this year, and will doubtless at the proper time show his talents in this direction. Albemarle is fortunate in having such an additional good farmer and citizen.

Mr. James Leigh Jones writes:

"The experiment I made in regard to the destruction of the potato-bug was as follows: I made a decoction of tobacco; and sprinkled the liquid when cool uniformly over the vines. This was done with just such a sprinkler as gardeners generally use. I made the decoction as strong as possible, and then used it quite profusely over the plants. I presume tobacco stems could be used quite as effectually as the pure leaf, though I used leaf. The effect is intoxication and a desiccation of the vines. The best time to sprinkle the vines is late in the afternoon, when evaporation is less rapid."

 To any one who will send us a club of *five* subscribers and \$5 between the 1st of August and 1st of October next, we will send all the back Nos. of this year, from January to July, free, in consideration of their effort in our behalf. 

A. M. Bowman, President of the Augusta Fair, advertises his Shorthorn Berkshire hogs and chickens in this issue. We doubt whether there is a breeder in Virginia who has better stock, or who is more thoroughly reliable than Mr. Bowman. He has a large number of Shorthorns, Berkshire hogs, and dark Brahmas for sale at a low price. Write to him for his catalogue.

Mr. Alfred Gerard, a large and intelligent farmer of Amelia county, Va., says, "If I had seen your two articles as published in the *Planter and Farmer* a few months since, on 'Fifty Years' Farming,' by Hill Carter, and 'On the Value of the Southern Pea,' by Edmund Ruffin, three years ago, I believe I would have saved \$10,000 in my farming operations." Mr. G. used 40 tons of fertilizers on his present crop of wheat. We hope he will give our readers his views on the same for our September No.

The Executive Committee of the Virginia State Agricultural Society meets on the 10th of the present month at the Buffalo Springs to make their final arrangements for the approaching Fair. The meeting of the Committee has usually been, at this season of the year, at the Montgomery and Greenbrier White Sulphur Springs, but we are glad to see that the *Southside* has just as attractive Springs as our Piedmont section for the representatives of our agricultural interest. The following gentlemen forms the Executive Committee: Col. W. C. Knight, Richmond; Dr. Wm. T. Walker, Goochland; Major A. H. Drewry, Charles City; Col. R. Harrison, Cumberland; Wm. A. Burke, Staunton; John T. Cowan, Montgomery; Col. J. D. H. Ross, Lexington; R. W. N. Noland, Loudoun; S. W. Ficklin, Albemarle; James Newman, Orange; Dr. S. P. Moore, Richmond; John D. Rogers, King George; Major Wm. T. Sutherland, Denville; Robert Beverly, Fauquier; S. S. Bradford, Culpeper; Dr. Monro Bannister, Culpeper; Prof. M. G. Ellzey, Blacksburg; Gen. G. S. Meem, Sheandoah; John Dodson, Dinwiddie.

The Boston (Mass.) *Journal of Chemistry* is the best journal of the kind published in this country. It is devoted to the sciences, arts, agriculture and medicine. Price \$1 per annum.

CINCHO-QUININE has gained the reputation of being superior to the sulphate of quinine, and is much cheaper. The manufacturers have certificates from the most reliable physicians all over the country certifying to its efficiency. Read advertisement on cover page.

We call attention to the advertisement of Mr. S. D. Atkinson, of Manchester, Va., who is now making large quantities of drain tile of all sizes. We have used large numbers of them, and find that they are of the best quality, and sold at reasonable prices—much cheaper than sold by any other manufacturer we know of. We advise such of our readers as wish them to write to Mr. Atkinson on the subject.

THE OLD WHITE.—Read the advertisement, in another column, of the Greenbrier White Sulphur Springs. Colonel Peyton has put down his charges for September to two dollars per day. This will enable hundreds to avail themselves of the benefits which that wonderful water bestows. Try the old White this summer. There is no place in the country which is equal to it.

SHORT-HORN CATTLE

—AND—


BERKSHIRE SWINE.

The undersigned offers for sale

BULLS, COWS AND CALVES,

Also, BERSKSHIRE SWINE of all Ages.

Amongst my Short-Horns will be found representatives of some of the most popular families of the day: such as Craggs, (pure Bates,) Louans, Rosamonds, Ianthas, Mary Anns, &c., &c., and at the head of the herd stands the high-bred Bates-Rose of Sharon Bull 3,555, Earl of Weldon 14,175, by the 2d Earl of Oxford 6,708; dam, Rose Bud 8th by the 13th Duke of Airdre 5,535; grand dam, Rose Bud 4th by Airdre 2,478, &c., &c.

 My Berkshires are all either imported from England or bred direct from imported sire and dam, and are second to none in America. My sow, "CARLOTTA," took First Prize at the Virginia State Fair in 1874, over T. S. Cooper's fine sow, "ROYAL BEAUTY," which had, only six weeks before, taken the prize at the Royal Show, in England. My imported "Hillhurst Rose," has been shown in New Jersey, Pennsylvania, Maryland and Virginia, and *has never been beaten.*

Prices to suit the times. Young Bulls especially, will be sold at prices within the reach of our Southern farmers.

A few Dark Brahma fowls kept—price \$6 per pair; \$8 per trio.

Address,

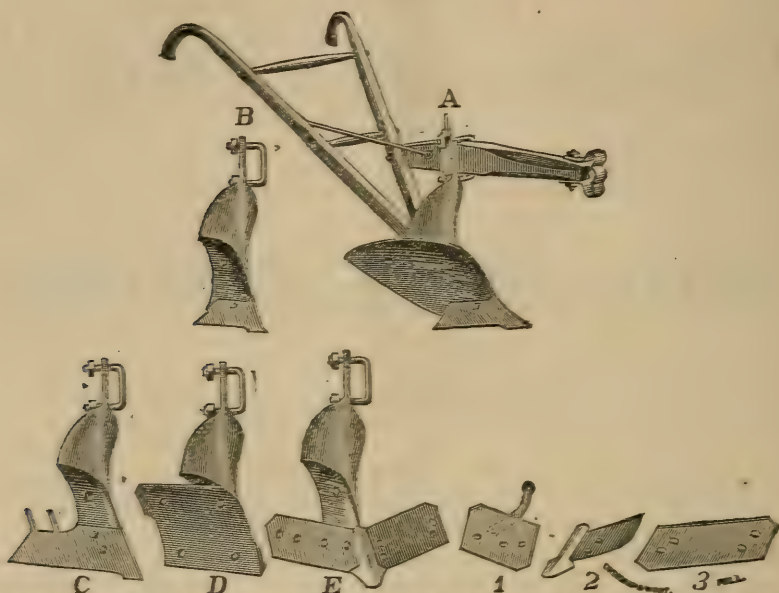
A. M. BOWMAN,

aug—tf

"Bellevue," near Waynesboro', Augusta Co., Va.

THE WATT PLOW,

THE BEST TURNING AND CULTIVATING PLOW MADE.



Warranted to be as represented, or to be returned if, on trial, it does not come up to the standard claimed.

The "Watt" combines *Ease of Draught, Ease to Plowman, Thoroughness of Work, Simplicity and Durability*, in a degree not possessed by any other Plow yet made, and

CANNOT BE CHOKED IN ANY LAND, HOWEVER FOUL.

We have recently invented, as an attachment to our One-horse Plows,

A COTTON SWEEP

(With reversible steel wings),

And a Cast Point. It will clean in any soil, is durable, and of very light draught. Several have been placed in the hands of planters for trial, who, after testing them with others, pronounced them the best they have ever worked. These points can be as easily replaced when worn out as a plow point can, and at a small cost. This Sweep was awarded First Premiums at S. C. State Fair and Orangeburg, S. C., 1874.

In addition to the Sweep Attachment, the A and B Plow has the Reversible Steel Scraper (D) for cotton, tobacco and all crops. There are also seven different sizes of mould-boards—from the largest turner (A) to the row-opener, cultivator and sub-soiler (B); also the pea-nut digger (C). With these different attachments, the Plow has no equal as a Turning Plow, Subsoiler, Cultivator, Row-opener, Scraper, Sweep and Peanut Digger. It may be said to be all that the planter or trucker wants, and is the most perfect implement made in every essential. With it an entire crop can be cultivated without the use of any other implement.

We manufacture the Watt Plow of all sizes, from one to four horses right and left hand. We guarantee them to work in any land, from the lightest sandy soil to the heaviest clay, and in clean land or foul. They run more level, and consequently with more ease than the plows in general use.

Having raised the standard and otherwise improved each of the different sizes of the Watt Plow within the past eighteen months (which does not conflict with the fitting of the *mould-boards, points or slides* of former ones of same number), whereby a great saving of labor to man and team is effected, better and deeper work done, less choking than by any other plow, we would be pleased to enjoy the patronage so liberally bestowed by the farmers of this and all the Southern States, as well as the North and West, assured that our plows of all sizes are superior to any now in use; and if they do not prove so after one week's trial they may be returned to us.

All our Plows and their Castings, Harrows, Cultivators, Coulters, &c., are made under our own supervision, and are made of none but the best material, and are warranted to be as represented.

CAUTION.

We especially caution makers, sellers and users of plows against infringements on the various patent rights of George Watt, which cover the Helve or Standard, Turning and Weeding Mould-Boards, Points and Slides—in fact, *every part* of the Plow. Infringements are already in progress by certain parties, who, seeing the popularity of the Watt Plow, are attempting to put on the market their *bogus castings in our name*. These castings are of inferior metal and *will not fit* our plows, and the farmer naturally attaches the blame to us, thinking they are genuine. We therefore urge planters, to save themselves from loss, to obtain their castings from us or our agents, and not buy of those who thus deprive us of our rights unjustly and injure themselves.

In order to do so, see that every piece of casting or point is marked "Patented," with date of same, and by G. Watt.

We have the *exclusive* right to make these Plows and Castings. Suits are now pending against infringers, and all parties making or selling them of other make will be dealt with to the full extent of the law. A party dealing in an infringement is as much liable as the manufacturer of it.

For a complete description of the Plow and price list, send for Catalogue containing testimonials of those who have used it, &c.


WATT & CALL,

Sole Manufacturers,

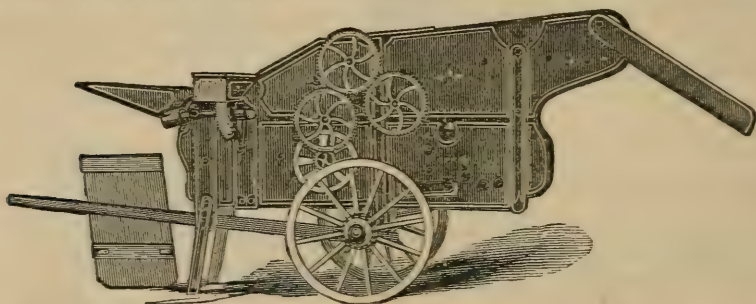
1402 Franklin Street, Richmond, Va.

aug

"THE BEST"
KELLER'S
GRAIN, SEED & FERTILIZING DRILL.
H. M. SMITH & CO.,
Agents for Richmond.

 Send For Circular.

GEISER'S
PATENT SELF-REGULATING



Grain Separator, Cleaner and Bagger.

H. M. SMITH & CO.,

Post-office Box No. 8, RICHMOND, VA.

General Agents for Eastern Virginia and the States of
 North Carolina, South Carolina and Georgia.

This is the most convenient, portable, and best made THRESHER and CLEANER now in use. It threshes rapidly, and cleans more perfectly than any other pattern. It has a SELF-REGULATING BLAST, which makes the blowing over of Wheat an impossibility.

THE MOUNTED VIRGINIA HORSE POWER,

Is especially adapted to run the Geiser, and the two together make the best threshing outfit in the world. The reports from the Mounted Power are all like the following unsolicited testimony:

CHARLOTTE, N. C., July 24th, 1873.

Messrs. H. M. SMITH & Co.:

Gentlemen.—Mr. J. R. Waller says of the "Mounted Power," it is all you claim for it; that if you will make and send a Wagon Jack, the thresherman need not lift more than a bushel of wheat during the season; and that sort of work which has been heretofore so laborious would become only play and pastime. When I hear from the rest I will report.

Very respectfully,

WM. F. COOK.

REBUILT!!

H. M. SMITH & CO.,

MANUFACTURERS OF

FARM MACHINERY & IMPLEMENTS.

TO OUR PATRONS:

Having rebuilt our machine shops, which were destroyed by fire Oct. 1874, and fully equipped them with new and improved machinery and tools, we are better prepared than ever before to supply your wants in our line, and thanking you for past favors, we solicit a continuance of the same, pledging our best endeavors to the satisfactory filling of all orders. Send for a Catalogue.

THE MITCHELL



FARM AND FREIGHT WAGONS,

AND THE

STUDEBAKER FARM WAGONS.

We are the General Agents of these celebrated Wagons, and solicit orders from the trade, and individuals.

PRICES VERY LOW.

ADDRESS

H. M. Smith & Co.,

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RICHMOND, VA.

RICHMOND COLLEGE,

RICHMOND, VA.

*The Session of 1875-76 will open September 22d,
and close 22d June.*

The Institution embraces eight independent schools, under the following

FACULTY:

EDMUND HARRISON, A. M., Professor of Latin.

H. H. HARRIS, M. A., D. D., Professor of Greek.

RODES MASSIE, A. M., Professor of Modern Languages.

J. L. M. CURRY, D. D., LL. D., Prof. of English and Acting Prof. of Philosophy.

E. B. SMITH, M. A., Professor of Mathematics.

C. H. WINSTON, M. A., Professor of Physics.

B. PURYEAR, A. M., Professor of Chemistry.

Expenses per session of nine months, embracing matriculation and tuition fees, fuel, lights and washing, \$118. Good board in messing clubs costs \$10 per month; at the College boarding houses, \$13. About \$90 will be needed on matriculation; \$35 1st February, and the remainder at intervals through the session.

The expenses of a day student per session are \$87.50.

The College Buildings, situated in the most beautiful and healthful portion of the city, just within the corporate limits, with thirteen acres of land attached, are ample for the accommodation of at least two hundred and fifty students.

The Institution offers to the student every facility necessary to his comfort, convenience and success, and is thoroughly equipped in all respects for dispensing liberal education, on terms unusually moderate.

For Catalogues, giving full information in regard to all the departments of the College, address

B. PURYEAR, *Chairman of the Faculty.*

FERTILIZERS!

PACIFIC GUANO AND FLOUR OF RAW BONE,

Undoubtedly the best, cheapest and most popular Fertilizers now offered for the

Wheat and Grass Crops.

A supply of the above standard and popular manures will be kept during the season, to which we ask the attention of farmers.

PURE PERUVIAN GUANO

ALWAYS ON HAND.

For further information and supplies, address,

ALLISON & ADDISON,

Richmond, Va.

COE'S AMMONIATED BONE PHOSPHATE.

Established in 1845.

And has sustained its high reputation for
THIRTY YEARS.

[Letter from Commodore Charles Lowndes.]

Easton, Talbot county, Md., July 16, 1875.

ANDREW COE, ESQ., Baltimore Md.

DEAR SIR:

I applied your Phosphate to wheat, at the rate of 200 pounds to the acre; the result proved satisfactory; I deem it a good Fertilizer.

Respectfully,

CHARLES LOWNDES,

[From the Purchasing Agent of Augusta County Grange.]

Staunton, Augusta county, Va., July 17, 1875.

ANDREW COE, ESQ., Baltimore, Md.

I have used your Phosphate for the last five years and it has never failed me; for one or two years I tried other standard fertilizers, but yours always excelled. Yours I am sure is better adapted to my land, and it has always been kept up to the standard. I shall use it again.

aug—It

W. H. PEYTON.

BELMONT STOCK FARM,

Breeds Thorough-Bred Horses,

PERCHERON NORMAN & BLACK HAWK STOCK,
SHORT-HORN CATTLE,

Chester White & Berkshire Hogs,

AND

DARK AND LIGHT BRAHMA FOWLS
FOR SALE.

S. W. FICKLIN,

Near Charlottesville, Va.

FARMERS AND DEALERS

PURE FINE GROUND BONE,

PURE BONE FLOUR,

PURE DISSOLVED BONE ASH,

Pure Dissolved Raw Bone.

66° Oil Vitroil, German Potash Salts,
Pure Chemicals for making Superphosphate at the lowest market price.

Call at R. J BAKER & CO'S.

Aug—ly

CHESTNUT GROVE Stock Farm and Poultry Yards, McKEAN & HULICH, EASTON, PENN.

Fine Bred and English Draft Horses, Asiatic Poultry and Fancy Pigeons, Light and Dark Bramas, Buff, Partridge and White Cochius, Antwerps, Carriers, Barbs, Owls, Magpies and Almond Tumblers.

POULTRY took fifteen Society and nine Special Premiums on Fowls and Chicks, and seven on Pigeons at Lehigh Valley Poultry Exhibition, held at Allentown, January, 1875.

FOR SALE Fine Bred and Draft Stallions, Gold Dust and other Colts. Eggs, Chicks and Pigeons in season.

RICHLAND STOCK FARM, NEAR QUAKERTOWN, PA.

THOMAS L. McKEAN, Proprietor, P. O. Easton, Pennsylvania.
PURE BRED SHORT-HORN CATTLE, JUBILEES,
LOUANS, YOUNG MARY'S, &c.

The above stock has been removed from Chestnut Grove Farm, and on hand and for sale at reasonable prices. Parties wishing to examine the Herd will be met at Quakertown Station, (which is one and a quarter hours ride from Philadelphia, via N. P. R. R.) by writing in advance to the Proprietor, at Easton, Pa.
~~See~~ Catalogues and Circulars upon application. Aug—tf

Notice to Wheat Growers.

Reduction of Price of

Z E L L ' S

CELEBRATED

Ammoniated Bone Super Phosphate,

Unrivalled for the wheat crop. For sale by agents and dealers throughout the country.

PRICE, \$45.00 per ton, at Baltimore.

"Dissolved Bone Super Phosphate" supplied to manufacturers and dealers at low figures.

We are prepared to furnish Granges with an "Ammoniated Bone Superphosphate of a standard quality, adapted to grain crops, at very lowest price.

P. ZELL & SONS, Manufacturers,

30 South St., Baltimore, Md.

Aug—3t

GREAT SALE —OF— LIVE STOCK!

THE LARGEST SALE THAT EVER OCCURRED in the Western country, at public auction, embracing nearly three hundred head of highly bred animals, will take place at the Nashville Fair Grounds, adjoining the city of Nashville, Tennessee, August 18th, 1875. The stock will consist of Thoroughbred and Trotting Horses, Short-Horn and other varieties of Cattle, Fancy Sheep and Swine of the different breeds. The thoroughbred horses are the get of such sires as imp. Bonnie Scotland, Brown Dick, Jack Malone, Vandal, Pat Maloy and others. The trotters, the get of Chieftain, Mambrino, Patchen, American Clay, Enfield, Woburn, Alhambra and others. The Short-Horns by the 8th Duke of Thorndale 8,030, Derby 7,800, Duke of Richland 9,940, and other noted bulls. The sheep and swine bred with great care, from recent importations. Those desirous of purchasing first-class animals, either for breeding or track purposes, will do well to embrace this opportunity. Catalogues ready for delivery in June. Address either of the undersigned at Nashville.

JOHN OVERTON, B. F. COCKRILL, M. S. COCKRILL, EWING & WILLIAMS, and others. aug—tf

G. W. ROYSTER.

J. B. LIGHTFOOT, JR.

G. W. ROYSTER & CO., Commission Merchants, RICHMOND, VIRGINIA.

Solicit Consignments of Tobacco, Grain, Flour and Produce Generally

Refer by Special Permission to J. W. LOCKWOOD, Cashier National Bank of Va., Richmond; ISAAC DAVENPORT, Jr., Pres. First National Bank, Richmond.

Grain Bags furnished on application.

LAND FOR SALE.

For Sale one of the finest Estates near the University of Virginia. It will be sold as a whole, or subdivided as may be preferred. Address

GEO. C. GILMER,
University of Va.

[Mr. Gilmer proposes to sell the above land at a very low price. The proximity of these lands to Charlottesville and the University, with its intrinsic worth, makes it one of the most desirable farms in Virginia.—Ed]. Aug—tf

Chester Springs High School,

Six miles of South Boston Depot, Richmond and Danville R. R.

T. OSCAR ROGERS, Principal and Proprietor.

Testimonials from Patrons, Professors of University of Virginia, where the Principal graduated, and from the Professors of three colleges commending the careful preparation of certain young men who are at those Colleges from this school. Charges comparatively very low, viz: \$88 for each term of twenty weeks. Address,

T. OSCAR ROGERS,

aug—1t

Black Walnut, Halifax county, Va.

NOTICE TO FARMERS!

REDUCTION IN PRICE OF BAUGH'S RAW BONE SUPER PHOSPHATE OF LIME.

STANDARD OF QUALITY STRICTLY MAINTAINED.

While we announce a reduction in the price of our RAW BONE SUPER PHOSPHATE, we would respectfully represent to dealers and farmers that its standard of quality has been strictly maintained. The proportions of soluble and precipitated Phosphoric Acid, Ammonia and Potash, have never been higher than they are in the article we are now selling our customers. This statement we make as a binding guarantee.

PRICE \$46 PER 2000 POUNDS, packed in good strong sacks of 200 pounds each.

BAUGH & SONS.

No. 20 South Delaware Ave., Philadelphia, No. 103 South St., Baltimore, Md.

Aug—1t

THE AMSDEN PEACH again proves the earliest largest and best. Red freestone. Buds safely by mail or Ex. per 100, \$1; 1000 \$8. Also 1 and 1 year old trees. Circular free.

L. C. AMSDEN, Carthage, Mo.

Aug—1t

The Fruit Recorder and Cottage Gardener

5 MONTHS FREE.

will be sent free 3 months to all who will send us a 3 cent stamp to prepay postage, as law now requires prepayment of postage. We do not ask any

one to subscribe for our paper until they know what they are to get. It speaks for itself. Price only \$1 per year. Purdy's Small Fruit Instructor is a work of 64 pp. that tells in simple language just how to grow fruits in abundance for home use or market. Price. 25 cents postpaid.

A. M. PURDY, Rochester, N. Y.

For Sale!
PURE JERSEY BULL
"GOLDSTICK."

(519 Herd Register of American Cattle Club.) Dropped July, 1870. Is in fine condition and perfectly gentle. To be had cheap. Pedigree and full particulars on application to

J. PATERSON,

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EPISCOPAL FEMALE INSTITUTE, Winchester, Va. Rev. J. C. Wheat, A. M., Principal, (formerly of Staunton, Va.) For circulars stating terms, &c., address J. C. WHEAT, Winchester, Va. References, The Bishops and Clergy of the Protestant Episcopal Church of Va.

Aug—1t

VIRGINIA LANDS.

UPPER JAMES REAL ESTATE AGENCY.
BY WILLIAM HOLMAN,

Cartersville, Va.

Who offers for sale upwards of 20,000 acres of land, lying in one of the most desirable regions of Eastern Virginia.

Catalogues sent on application.

[Mr. Holman is one of the most reliable farmers in the State. Those wishing to buy land should send for his Catalogue].

Aug—tf

MILLERS! MILLERS!!

A rare chance to buy a No. 1 Merchant Mill with Saw Mill attached, immediately on the Valley Railroad 2½ miles from Harrisonburg, Rockingham county, in the very heart of the Shenandoah valley of Virginia. Located in a large wheat-growing region, and complete in all of its appointments. This Mill offers an opportunity rarely met with to those desiring to purchase Mill property.

Full information will be furnished on application to

Rev. D. H. LANDIS,

aug—1t

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PERUVIAN GUANO.

Until further notice, Peruvian Guano, guaranteed to contain 10 per cent. of Ammonia, will be sold by the Undersigned or their Agents, in lots of not less than Ten Tons, at SIXTY DOLLARS CURRENCY per Ton of 2240 pounds, *full weight at the time of delivery.*

A liberal discount will be made to dealers or others on the entire amount bought during the Spring or Autumn seasons.

ROBSON, BURTADO & CO.,

Agents of the Peruvian Government.
July 1st, 1875. *New York.*

AGENTS:

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G. W. WILLIAMS & CO., Charleston S. C.
R. G. LAY, Savannah, Ga.

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One square, 10 lines or less, one insertion.....	\$2 00
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FRESH GARDEN and FIELD SEED

At the old stand of Palmer & Turpin,
1526 Main street, Richmond,
Orchard Grass,

Timothy, Herds, Clover,
Kentucky Blue Grass.

Send for Catalogue.

feb—tf

W. H. TURPIN.

White Sulphur Springs,

WEST VIRGINIA,

Famous for its Alterative Waters and fashionable company, is open, and the following schedule of prices adopted:

FOR JULY AND AUGUST.

Monthly.....	\$2 85 per day.
Weekly.....	3 00 per day.

FOR SEPTEMBER AND OCTOBER.

Monthly.....	\$2 00 per day.
Weekly ..	2 50 per day.

Important and expensive improvements have been made in Building and Lodging accommodation, including new Spring Beds, &c.

Descriptive pamphlets obtained of Messrs. Purcell, Ladd & Co., Richmond, Va.

aug—tf

GEO. L. PEYTON & CO.

R. SINCLAIR & CO.,
 MANUFACTURERS OF
AGRICULTURAL IMPLEMENTS AND MACHINERY,
 ALSO, GROWERS AND IMPORTERS OF
GARDEN AND FIELD SEEDS,

Dealers in FRUIT TREES and PLANTS

Would call the special attention of our friends and customers to the following first-class Machinery and Implements, which we guarantee to be equal to any article of the kind made in this country, being all of our own manufacture.

We name in part, such machines as are required by the Farmer and Planter for the Winter and Spring seasons, viz: **SINCLAIR'S PATENT MASTICATOR**, of which we make four sizes, viz: Hand, Steam and Horse Power.

Sinclair's Patent Screw Propeller, Hay, Straw and Fodder Cutters, of which we make four sizes, viz. Light Hand Power, Hand Power, several sizes, and Horse Power three sizes. All of the above-named Cutters are our own Patents and Manufacture, and are such as we can recommend.

Reading's Patent Horse-Power Corn Sheller, with Fan Attachment.
 " " " Sheller, plain.

Double Spout Hand or Power Sheller **Single Spout Shellers**—all kinds.

Corn and Cob Mills, Grist Mills, for Farm and Plantation use.
WHEAT AND CORN FANNING MILLS.

"Anderson's" Agricultural Steamer, for preparing feed for Stock. The best in use.

Threshers and Separators—different kinds and sizes.

Horse Powers, all sizes and patterns.

Ox-Yokes and Bows, Horse Power Road Scrapers, Hay and Straw Presses.

Plows, different kinds and sizes, Harrows, Cultivators, and all kinds of Farming and Horticultural Tools. Address,

Septly **R. SINCLAIR & CO., 62 Light Street, Baltimore, Md.**

IMPROVE YOUR STOCK.

FOR SALE—Alderney and Durham Cattle. Cotswold and Shropshire Lambs, and Berkshire Swine.

PREMIUM ALDERNEY BULL "EZRA"

three years old. Sire Imp. Hannibal (618); Dam Lily (500). Price \$100.

PREMIUM ALDERNEY BULL "GOLD DUST" two years old. Sire Imp. Southampton (117); Dam California (344). Price \$80.

ALDERNEY BULL CHATHAM,

eighteen months old; now fit for service. Sire Sudbrook (1262); Dam Imp. Rose Harebell (3243); solid color, black points Price \$80.

ALDERNEY BULL CALF ACCIDENT,

three months old. Sire Saladin (447); Dam Minerva (341); one of the best Jersey cows in the State Price \$50.

All the above are from Herd-Book Stock, and can be entered in next volume of Herd Book.

HERDBOOK ALDERNEY BULL SUDBROOK (1262),

nine years old; bred by J. Howard McHenry; one of the finest bulls in the State. Price \$100.

PREMIUM ALDERNEY BULL HANNIBAL

four years old. Sire Imp. Hannibal (618); Dam pure Alderney Cow, but not registered; took 1st Premium State Fair 1873. Price \$80.

DURHAM BULL STONEWALL,

bred by James Gowen of Pennsylvania, roan color, of fine size, and splendid form. Price \$100 worth twice the money.

TWO DURHAM CALVES (Heifer and Bull),

four months old, roan color. Price \$30 each.

COTSWOLD AND SHROPSHIRE LAMBS,

at from \$10 to \$15 each.

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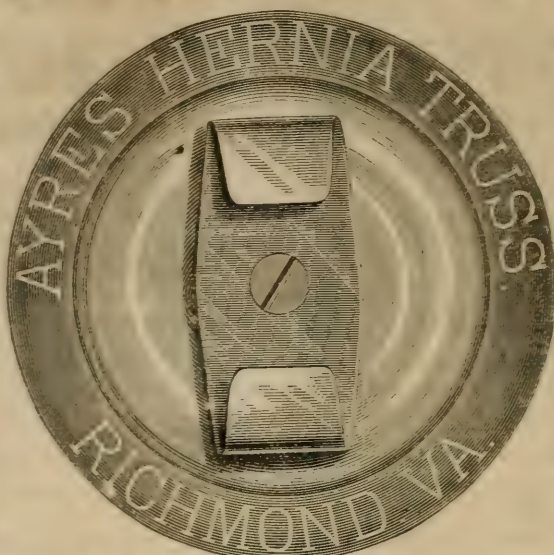
from best stock in the State. Price \$8 single pig, or \$15 per pair.

The above prices are one-fourth less than Northern prices for such stock. Address

A. P. ROWE,
Fredericksburg, Virginia.

The AYRES TRUSS is the best I have ever seen for Hernia in its various forms, and heartily recommend it to the profession.—HUNTER MCGUIRE, M. D., Prof. Surg. Med College of Va.

Send for Descriptive Circular to



SAMUEL AYRES, Richmond, Va.

The Inventor refers by special permission to
STANFORD E. CHAILLE, A. M., M. D., Professor of Physiology University of Louisiana.
FRANK H. HAMILTON, M. D., L. L. D., late Professor of Surgery, Bellevue Hospital Medical College, New York.

J. L. CABELL, M. D., Professor of Physiology and Surgery, University of Va.

ISAIAH H. WHITE, M. D., Demonstrator of Anatomy, Med. Col. of Va.

JAMES R. McCRAW, M. D., Prof. Practice of Medicine, Med. Col. of Va.

J. S. WELLS, M. D., Prof. Materia Medica, Medical Col. of Va.

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"EUREKA"

Ammoniated Superphosphate of Lime,

MANUFACTURED BY

The Atlantic and Virginia Fertilizing Company,
Near ORIENT, L. I.,

Always proves to be the best fertilizer when *accurately tested*. i. e. by the application of equal values, by the side of any other, whether on *tobacco, wheat, corn, cotton, grass or vegetables*.

See the report of Mr. A. M. Bowman, President of the Baldwin Augusta Agricultural Society, to the Virginia State Agricultural Society, published in this number of the *Planter and Farmer*, and note the fact that the "Eureka" is not only much the best of the six fertilizers he tried, but that it was also the cheapest, and bear in mind that at the time he tried it he did not even know who was manufacturing it: and followed his example in ascertaining what is the *best* and also in letting the farmer know which is the best. The value of accurate experiments, and the purchase from reliable manufacturers, cannot be overestimated.

WM. G. CRENSHAW, Pres. FRANK G. RUFFIN, Supt. State of Va.

If there is no agent for the sale of "Eureka" in your immediate neighborhood, write to any of the following General Agents: W. N. RUFFIN, Richmond, Va.; JNO. ARRINGTON & SONS, Petersburg, Va.; HOOE & JOHNSTON, Alexandria, Va.; JOSHUA WALKER, Baltimore, Md.; WILLIAMS & MURCHISON, Wilmington, N. C.; W. C. COURTNEY & CO., Charleston, S. C.; J. W. LATHROP & CO., Savannah, Ga.

Send for Circular.

BOTTOM TOUCHED.

Dry Goods at Lower Prices than Ever.

Money saved by buying your Dry Goods from Levy Brothers,

Who have made large purchases since the recent decline.

Fancy Grenadines at 8½, 10 and 12½c. per yard, worth 16½, 20 and 25c.; Rich Styles Fancy Grenadines at 16½, 20, 25, 30 and 35c., worth from 25 to 50c.;

Black Grenadines in all qualities from 12½c. up to \$2.25 per yard—this embraces not only the cheapest, but best assorted stock ever offered in this city:

Ecu Linen Tissue Suiting at 8½c. per yard, worth 16½c.; at 12½c., would be a bargain at 25c.; at 16½c., worth 30c.—these goods must be seen to be appreciated; Silk-Warp Japanese Stripes and Plaids at 30c. per yard, worth 50c.;

Japanese Cloth at 12½c., worth 25c.; Wash Poplins, best goods manufactured, at 12½c. and 15c., worth 16½ and 25c.; Debeques, at 25, 30, 35, 40 and 50c. These goods can be had in all the new shades:

New style Plaid Dress Goods from 25 to 50c. per yard—a reduction of from twenty-five to fifty per cent. has been made in these goods; Fast-Colored Lawns at 8½, 10, 16½, 20, 25, 30, 37½ and 50c.;

Also, at the lowest prices, Pongees, Mohairs, Japanese Silks, Jaconets, Cambrics, Linen Lawns, and all other styles of fashionable dress goods: Black Alpaccas at 25, 30, 35, 40, 45, 50, 60, 75, 85, 90c., \$1 and \$1.25;

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Victoria Lawns at 16½, 20, 25 and 30c.; also, Piques at 16½, 20, 25, 30, 35 and 40c.—all remarkably cheap; Swiss Muslins from 12½c. up to 50c. per yard—all very cheap;

Checked and Striped Nainsook Muslins, Checked and Striped Swiss Muslins; Corded, Striped and Figured Piques—all at extraordinary bargains:

Lonsdale Cambric, first quality, one yard wide, at 16½c. per yard; Knight's Cambric, 33 inches wide, at 10c., would be a bargain at 12½c.;

Utica Sheeting, 10-4 wide, in remnants from two and a half up to ten yards, at 40c. per yard; 50c. is the regular price everywhere; Remnants of Dress Goods of every description to be sold at less than half value;

Black and Colored Silks at lower prices and in greater variety than at any other establishment in this State; Embroidered Curtain-Muslin, one yard wide, at 25c., worth 37½c.;

Hamburgh Net for Curtains, at 20, 25, 30, 35, 40, 50c., and up to \$1 per yard; Hamburgh Lace Curtains from \$4 to \$30 per set for two windows; Hamburgh Lace Lambrequins, from \$2 50 up to \$5 a pair—all very cheap and desirable;

Window-Shades in great variety, among which will be found an exact imitation of lace shades, now so fashionable: A large assortment of Curtain Fixtures, such as Cornices, Bands, Loops and Hooks;

Black, White and Ecu Hamburgh Nets, at a reduction of 50c.; A full assortment of Laces suitable for trimming; A large assortment of Silk Neck Scarfs and Ties; Also, Black Lace Scarfs and White Lace and Muslin Scarfs;

Ready-Made Dresses for ladies in all of the latest styles, from \$3 to \$25; A full assortment of Under-Garments at extraordinary low prices;; A large assortment of Ducks and Drillings for boys' and men's wear;

Sash Ribbons at 25c., 30c., 35c., 40c. and 50c., and up to \$1.25 per yard—all extraordinarily cheap; A full assortment of Ribbons from a half-inch up to seven inches at the lowest prices; Gauze Shirts for men and women—some as low as 40c. for men;

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Black Grenadine Shawls at \$3, worth \$4; Laces and Embroideries in endless variety at low prices; Goodrich & Barnum's Tuckers at 75c.; Machine Needles at 4 and 5c.; Machine Oil in large bottles at 15c.;

Clark's and Coat's Spool Cotton at 70c. per dozen;

And thousands of other articles not enumerated in this advertisement.

Prompt attention to orders.

july—tf

LEVY BROTHERS, *Richmond, Va.*

ESTABLISHED 1839.

TO FARMERS, PLANTERS and GARDENERS

PURE Ground Bone,

MANUFACTURED AND FOR SALE BY

JOHN BULLOCK & SON,

Factory: Washington Road, Baltimore, Md.

Store: No. 61 S. Gay Street, Baltimore, Md.

P. O. Box 636.

For more than thirty years we have been engaged in the manufacture of "Pure Ground Bone", our crude stock being gathered daily from the butchers here, with whom we have yearly contracts. We have completed our new factory, and with the addition of the latest and most approved machinery, will be able to fill all orders sent to us at short notice and guarantee at all times to the purchaser a first-class article at the lowest market price.

Respectfully

JOHN BULLOCK & SON.

MORO PHILLIPS. MANUFACTURING CHEMIST,

MANUFACTURER OF

ACIDS AND OTHER CHEMICALS.

:0:

MORO PHILLIPS' SUPER-PHOSPHATE, Price \$50—the best grain producer in the market.

MORO PHILLIPS' PURE PHUINE, Price \$50—the best fertilizer for truckers we know of.

MORO PHILLIPS' TOBACCO INVIGORATOR, Price \$60; prepared especially for Tobacco.

SERENA GUANO, a natural organic deposit.

For sale at Depots { 110 S. Delaware Av., Philadelphia, Pa.
 { 95 South Street, Baltimore, Md.,
And by trade generally. Discount to dealers. ap-6t

G. F. WATSON'S FURNITURE WORKS, RICHMOND.

Having timber tracts in this State sufficient to last several years, with a complete lumbering rafting, and saw-mill organization of fifty men, together with one of the most complete factories in the country located in this city, can furnish Poplar and hard wood (no soft pine) low-priced FURNITURE as cheap as any factory North or West—and fine Walnut FURNITURE cheaper. A stock of one million feet of lumber insures seasoned work, warranted in this and every respect. Manufacture MATTRESSES of all kinds.

Lumber-mill, Indiantown, Va.; Factory, Rocketts street; lumber-yards, Ash and Poplar streets; warerooms, No. 18 Governor (Thirteenth streets,) Richmond. spl

FARMERS AND DEALERS Pure Fine Ground Bone

PURE BONE FLOUR. PURE DISSOLVED BONE ASH. PURE DISSOLVED RAW BONE

66° OIL VITRIOL. GERMAN POTASH SALTS. Pure Chemicals for making Superphosphate at the lost market price. Call at

R. J. BAKER & CO'S.

S. L. MERCHANT & CO.,

76 SOUTH ST.,

(Entrance on Maiden Lane,)

NEW YORK CITY.

IMPORTERS OF

ENGLISH, FRENCH AND GERMAN

PORTLAND CEMENT

OF THE FOLLOWING BRANDS:

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FRANCIS & CO.,
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Marble and Interior Decoration—VARIOUS KINDS.

KEENE'S (Superfine and Coarse.)

PARIAN CEMENT

do.

DYCKERHOFF'S (Black Cement.)

MARTIN'S

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Arrive at Gordonsville,	12.45 P. M.	12.30 A. M.
Arrive at Washington,	7.33 P. M.	6.33 A. M.
Arrive at Charlottesville,	1.45 P. M.	1.24 A. M.
Arrive at Lynchburg,	4.50 P. M.	4.50 A. M.
Arrive at Staunton,	4.10 P. M.	3.30 A. M.
Arrive at Goshen,	5.56 P. M.	5.14 A. M.
Arrive at Millboro',	6.17 P. M.	5.36 A. M.
Arrive at Covington,	7.51 P. M.	7.06 A. M.
Arrive at Alleghany,	8.59 P. M.	8.14 A. M.
Arrive at White Sulphur,	9.15 P. M.	8.32 A. M.
Arrive at Hinton,	12.15 A. M.	10.35 A. M.
Arrive at Kanawha Falls,	4.20 A. M.	1.25 P. M.
Arrive at Charleston,	6.15 A. M.	3.25 P. M.
Arrive at Huntington,	8.30 A. M.	5.45 P. M.
Arrive at Cincinnati,	6.00 A. M.	

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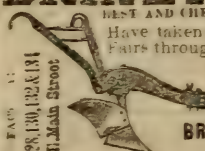
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DEVOTED TO

Agriculture, Horticulture, and Rural Affairs.

L. R. DICKINSON.....Editor and Proprietor.

RICHMOND, VA.,

OCTOBER, 1875.

No. 10.

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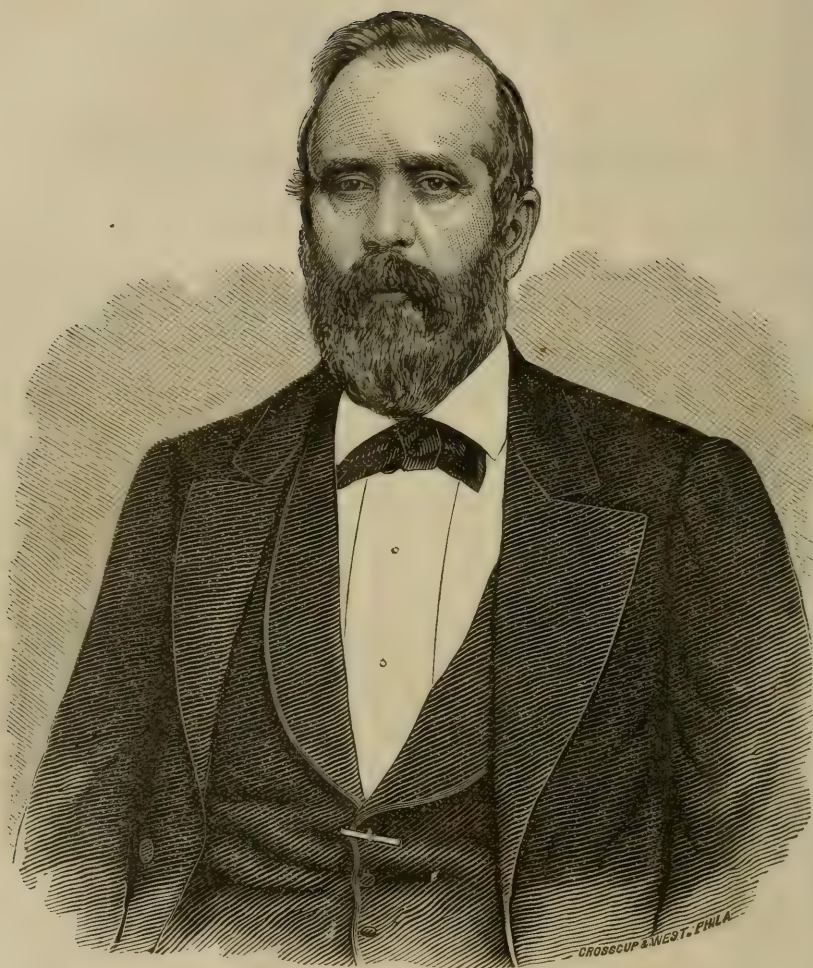
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Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON, EDITOR AND PROPRIETOR.

New Series. RICHMOND, VA., OCTOBER, 1875. No. 10

[For the Southern Planter and Farmer.]

THE BEST REMEDY FOR POOR LANDS.

The great want of the farmers of this State, especially of the Piedmont region, is relief from the necessity of cultivating poor lands. Almost all the high lands, though not poor originally, have been made so mainly by a train of circumstances beyond the control of those who cultivate them. Originally this particular region was not surpassed as a farming country by any other section of the State; but during the war many of the best farms were almost literally destroyed by government stock, quartered on them for grazing and forage, without any regard to the condition of the land, whether wet or dry, and during very wet seasons they were trampled up into mortar. We speak of the injury done to lands by plowing too wet; but no plowing ever injured lands like this trampling. A farmer of Albemarle told me a few days since that he had a field trampled in this way during the war, and it had not recovered from it yet. Since the war we have grazed too much ourselves. The scarcity of grass has made it a necessity to graze close, *very* close, so that the bear surface has, during the hot months of summer, suffered from the heat of the sun. In addition to this, we had four summers of parching drought in succession, during which there was little or no vegetation produced for the protection of the land, and its life was literally scorched out of it. Since 1869 until the present summer no one passing through this region would recognize it as the rich vale lying between the Blue Ridge and the Ragged mountains. But the copious rains of this summer have clothed the fields over with green, so that this most beautiful section of our State begins to look as it did in former years.

Now, if I have stated the case correctly, it must be plain to the practical mind that the great want of our lands at this time is *vegetable matter*. The grass crops were totally destroyed during the

.

war, as I have stated above, by government stock, and since the war kept down by our own stock; and though vigorous efforts have been made to restore it by regular seeding, owing to the sterility of the soil few succeeded in getting a stand of grass, and the fields were still destined to lie bare and receive the burning heat of the sun. But this summer of rain has clothed the naked fields with a very encouraging crop of vegetation. This in former years was the finest wheat-growing region of Virginia; but during these years it has been a waste of seed and labor to sow it without a fertilizer, and the fertilizers have been too expensive and too uncertain for general use. Tobacco could only be raised on bottom lands or by the use of a heavy dressing of some expensive fertilizer. Nearly all crops, both of wheat and tobacco, that have gone into market from this region have paid the enormous tax of the manipulated manure, and hence the scarcity of money among our farmers.

All this, as I have stated above, has come upon us unavoidably. But now, under the smilings of a kind Providence, we have it in our power to mend our fortunes somewhat, by a judicious use of the products of nature. The natural fertilizers is *on* the soil, and all we have to do is to put it *under* at the proper time. All lands intended for cultivation next year, except grazed or sod lands, whether in oats or corn, should be plowed before the hard frosts come and kill the vegetation. A *green fallow* is highly prized by experienced farmers as the very best means of fertilizing soils, and they sow peas, buckwheat, or anything else that will produce a heavy green crop; but we have now a heavy green crop already on the land without our cost, and all we have to do is to turn it under. It may be grass or it may be weeds; no matter what, so there is a plenty of it. Give me a sufficient amount of *vegetable* matter and I will not ask you for the *mineral*. There is usually enough of every constituent to produce corn, wheat or tobacco where there is a sufficiency of *vegetable matter*. Then if I am right, what we have to do is to encourage the growth of vegetation on all our lands—grass, if we can get it to grow; but if we fail in grass, let the weeds grow if they will, or even the briers rather than have the fields naked. Weeds and briers shade the land, and if mowed off in the month of August, as they ought to be, they make a rich dressing, and no vegetable product is more fertilizing than briers cut and left to decay. A field left out to rest for two, three, or four years, if not grazed, will enrich itself if not entirely exhausted when turned out. But where shall we find such a field? When a field is left out to rest, the young cattle and the sheep and the hogs are all turned in upon it, and the milch cows and horses are turned in occasionally for a change. In this way the grass is shaved off as fast as it grows, and there is no return for it save the droppings of the stock, which does not amount to a tenth of what they take off.

In scientific works on fertilizing we read of the “ammonia of the atmosphere.” I think it fair to presume that there is not only ammonia, but many other fertilizing properties in the atmosphere which

are drawn to the soil through the agency of growing plants, and when the plants are suffered to be grazed off as fast as they grow, all these aerial influences are lost. Then I would say to the farmer, reduce your stock until your fields have had time to recruit—until they shall have produced vegetation enough to fertilize them—and then you can not only reap a remunerative crop without the use of the manipulated manures, but you can multiply animals again to a reasonable extent, and you will have grass enough to support them. Lands that have been run down so low that they will not produce any vegetation—not even hen grass—must have a different treatment. When a large field gets into that condition it becomes a troublesome affair in the hands of a medium farmer; and there are hundreds of such fields scattered around through this once fertile region of Virginia. Some of them are wholly given up to grow up in pines, while others are still plowed and planted, producing crops that would scarcely pay for the plow-points worn out in plowing them. The man who continues to cultivate such land inevitably grows poorer every year. But what is he to do? He knows very well that a good coat of manure would make his land produce good crops; but where is the manure to come from? He cannot go into the market and buy the artificial manures. In short, he cannot restore it all at once; but he *can* do this: he can thoroughly plow a *part of it*—one, two, three, or four acres—say, in the month of May, and harrow down until it is well pulverized, and then lay off with the shovel plow drills two feet apart, and then gather up all the manure he can raise and put a light sprinkling in the drills as far as the manure will go, and then drill in black peas, and cover lightly with earth. When the peas are well up give them a coat of plaster. Cultivate with the coulter—the deeper the better. When the first pods begin to ripen, turn under with two-horse plow; harrow down again and sow buckwheat, which must also be turned under in the fall. The ground may then lie until spring, when it may be flushed up and sowed down with red clover and orchard grass. If the seasons should be fair, by the next fall the grass may be turned under and wheat may be sowed with a tolerable prospect of a good crop. Thus, in one and a half years, land that was too poor to produce a good crop of hen grass may be so far restored as to grow a good crop of wheat, and that, too, without expense, except a little manure, such as can be gathered up about the place. This process continued, with a fresh lot taken up every year, only a few years will be required to bring the whole field back to a cropping condition.

If farmers would take the above suggestions, they would make their lands, by the help of nature, enrich themselves. But they *must not graze*, and they must not buy fertilizers unless they *have the money to pay for them*; and they must cease to plant where the *certainty is that the crop will not pay for the cultivation*. I think the doctrines above are sound and practical, and within the reach of all farmers, no matter how small, and are especially adapted to the “little fellows” spoken of by one of your correspondents.

Albemarle county, Va.

S. M. SHEPHERD.

[For the Southern Planter and Farmer.]

THE BEST AND EASIEST WAY TO MANAGE MANURE.

I have seen a hundred different ways published to manage manure, but they were all wrong. They either required more labor than my method, or they did not save *all* the manure. My mode (which I have practiced for years with astonishing results) is this: Just as soon as a load or two of manure collects in my stables, I select the place I want to put it; take it right from the stable, haul it *where I wish to apply it*, and throw it in a ridge about three feet high. Now cover *thoroughly* with the earth from each side of the pile; let it remain until all the manure has disappeared, which will be in about six or eight months—less time than it will take to thoroughly decompose if not covered with earth; and as manure is not food for the plants until decomposed, you lose no time by composting. When your heap is thoroughly cooked, plow up to it, and apply *on top*. Manure cannot escape after it is composted. What farmer would buy a bottle of ammonia and leave the cork out? Is not manure *constantly* losing (from the moment it is made) a large part of its best ingredients? Now, you are not content to leave your manure with the cork out, but you must needs spread it out over a large surface of land, so that it can have every possible chance to get away from you. I am no chemist, but just state such facts as are common to all, and which none can deny. The only question to determine is: *How much* does manure lose in decomposing if not covered with earth? I think I have seen it stated, on good authority, that a load of well-rotted manure contains no more manurial properties than a load of unrotted manure; in other words, as manure diminishes in bulk, in decomposing, it loses its manurial properties in about the same proportion. Now, it takes four or five loads of fresh manure to make one load of *well-rotted* manure. This would make manure lose three-fourths to four-fifths of its value in decomposing, if not covered with earth. After five years' experience, I believe that one load of manure composted is equal to four not composted.

There is a farm in Chester county, Penn., where the effects of a single compost pile (which was large enough to cover half of the farm) was plainly visible thirty years after it was made. The man who made this compost pile was \$10,000 in debt. He paid his debts and put \$100,000 in bank. He attributed all his success to his big compost pile. When asked if he ever repeated the dose, he said, No; that one compost pile had made him as much money as he wanted, and would show you his barn-yard with manure in it which he would not take the trouble to haul out.

The labor of making compost in this way is small—nothing as compared to hauling the earth to the stable and then hauling back to the field. If the manure is properly covered, not one atom of it can escape. If manure does not lose most of its best properties when not composted, why does it injure a field to graze it too close? Does not all the grass the cattle eat go back on the land as manure?

No, it does not go back to the land; it falls on top of the ground, and as it goes through the process of decomposition it evaporates and goes off in the air. Where does the air get its *immense* fertilizing properties from? It does not get any of it from my manure pile; but there are plenty of manure piles in my neighborhood not composted, so it collects three-fourths of them, and as it passes over my farm it gives my plants just as large a share as anybody else's. The poorer the farmer and the better the manure, the more imperative it is to compost.

Yours, &c.

W. T. TALLANT.

[NOTE BY EDITOR.—We are compelled to differ, from our worthy correspondent, though we are not so sure as he appears to be, that we are exactly right and everybody else wrong. We have always thought, and we think now, that composting is a costly method of making manure. Our plan is to permit the manure to lie in the stable, trampled by the stock, until we have the ground ready for its reception. We add from day to day just enough litter to keep the stock dry. The constant treading keeps the manure compact and prevents fermentation. The urine of the stock keeps it moist, and a little plaster sprinkled over it occasionally will fix all the ammonia. After the land is broken up, we haul the manure direct from the stable to the field, and apply it broadcast from the cart, and harrow it in. If ammonia is liberated by forking up the manure, we scatter a little plaster over each load, and after it gets into the field the freshly-plowed land will readily absorb all the valuable fertilizing elements, no matter how volatile, and the first rain will dissolve the most soluble parts and distribute them through the soil in the best possible condition for plant food. By this method nothing is lost and all the labor of composting is saved: beside the manure is much more evenly distributed than it can possibly be if it is piled in the field. No farmer, in our opinion, can afford to be without ground plaster at all times in his barn.]

[For the Southern Planter and Farmer.]

FENCE QUESTION.

Much has, of late, been said in our public journals, touching the "fence question," and yet it seems no nearer a satisfactory solution than when first agitated. Its importance would seem sufficient to call forth earnest and decided action on the part of the farming community. Now that they are uniting in organized efforts for asserting their rights, it would seem proper that this matter should receive due attention.

A general law applicable to every county in the State should be enacted, making it obligatory that every owner of stock should confine them within his own enclosure—thus lessening the expense of keeping up fencing, at least two-thirds, and saving to each farmer in this item alone, an amount more than sufficient to pay his heavy state and county taxes.

Indeed the present state of things is becoming to very many farmers an intolerable grievance. Much of the fencing in the writer's section (and I presume it is pretty fair specimen of what it is throughout the state) is becoming every year more and more indifferent—so much so, that in some localities he knows of, hog rais-

ing has been almost abandoned, only a few being kept in one's own enclosure, or in pens near the dwelling the year round. And such is the condition of the fencing on some of the adjacent farms, that, if one's hogs chance to get out of his own pasture, or should be let out to share in the fall mast, there is nothing to hinder their getting through such fences into their owner's crops, when they are not unfrequently shot, mangled with dogs, and if not killed, yet badly crippled. And strange to say, yet it is true, that such persons will lay claim for damages to their crops with enclosures hardly sufficient to keep out yearlings.

It is certainly hard and oppressive that one farmer should not only have to keep up sufficient fencing to protect his own crops from damage by his neighbor's stock, but also to confine his own stock to prevent their getting into his neighbor's fields or crops. This sort of thing, together with hog stealing, has nearly driven hog raising from this section of the country. Never within the memory of man have so few hogs been seen as at the present day—and most of these few are either confined in a small lot near the house, or in the owner's pasture. Many farmers who formerly raised more pork than enough to supply much larger families than they now have, do not now raise a sufficiency and have to buy.

Practically many of us have to confine our stock at home as though the so-called *fence law* were in operation, without any of its benefits, since we must expend much of our scanty earnings in keeping up fencing to prevent other people's stock from destroying our crops.

M. B. S.

Fluvanna, Va.

[NOTE BY EDITOR.—We are very confident that we could easily show by statistics that the fences of Eastern Virginia cost more every year than all the live stock in that part of the State is worth. Let any farmer sit down and make the calculation for himself and neighbors, and he will be satisfied of the fact.

One fourth the fencing now in use will effectually control all the stock in the State, upon land amply sufficient to support them; thus giving a saving of three-fourths of the most onerous burden the farmers have to bear. Let the farmer demand of the Legislature a general fence law.]

[For the Southern Planter and Farmer.]

DOG AND VAGRANT LAWS.

I have concluded to give your readers a few thoughts on several points. First, we expect those men we send to the Legislature and Senate to give us a good systematic dog law, for under the present system the dog is no more recognized in the law than a wolf, or any other wild animal. I know families that have five and six dogs who do not make bread enough to eat themselves. Those who own them are always crying out that the mountains are full of wolves, bears, &c., when the dogs are doing all the mischief that is done. There is no need of any man having more than one dog to help him manage stock about his farm; and if he does not farm and raise any grain

he has no need of a dog, and if any man that is not in this lists and he wants a dog, let him pay taxes for him and be accountable for the dog's conduct. So by making a dog law we will improve the stock of dogs. It will do away with these trifling senseless dogs, and people will try to get the best stock of dogs that they can find.

There is one other matter that our law-makers ought to take into consideration. That is, we ought to have a good systematized vagrant law. It seems that for the last few years there is a numerous host that is traveling up and down the country continually begging their way, and they never can be had to do any work. I have asked them why they did not stop and work and make themselves some money, and they would reply that they had not time. But they have time to keep going first one way and then the other. If we had a good vagrant law we would not have quite so many in the poor house as we have, and it would be better both for them and the tax payers. Our best farmers say that they want a dog law and a vagrant law, and they say that they will expect those law-making men this winter to give us one, and if they do not, the next time they will let them stay at home and try some body else. We do not want men in the Legislature that will sell themselves for votes, but we want men that will do something for the interest of the farming class as well as other occupations. A few years ago they made a dog law, and how long did they let it stand? As soon as the dogs were assessed they repealed the law because they thought it was not popular.

E. B. HILTON.

Scott County, Va.

[NOTE BY EDITOR.—We have written and published so much on the subject of dog laws, &c., that it would seem that nothing more could be said. There is but one way to secure the passage of such laws as our correspondent desires, and that is for the Grange to take hold of the matter and every Subordinate Grange in the State pass resolutions demanding the passage of such a law by the Legislature. Until this is done the politicians will continue to dodge the issue.]

[For the Southern Planter and Farmer.]

ERRATA. TOBACCO. FENCE POST, &c.

In my recent communication to the *Planter and Farmer* on "Reclaiming our Bottom Lands," I am erroneously made to say in the sixth paragraph and seventh line, who *diverted, &c.*, which should be who *directed that the river San Diego, which had been diverted, &c.*

I will make the following brief addition to my communication on "Curing Tobacco," &c. I knew a farmer in Caswell, N. C., to cure a crop of tobacco with seasoned oak wood, cut in lengths of two feet, who got the highest price of any man in the county. Some of our finest tobacco makers never prime their tobacco, and as the lugs sell for a higher price than the leaf according to quality, they gain in this respect as a finer texture of the leaf, and the bottom leaves having attained their growth draw but little from the plant. Top to 8, 10 or 12 leaves above the leaf you would break off in priming.

DURABLE POSTS.—A farmer of Cleveland, Ohio, about the commencement of 1873, gave the following statement of his experience in preparing fence-posts. In June and July, 1850, he employed men to get out fence-posts of maple, elm, ash, basswood, linden, &c. These posts in the green state, rough shaped, and from trees of all ages, he treated with a composition of coal-tar from the gas-yards, with unslacked lime in equal proportions by measure, applying the mixture while effervescent to that end of the post which was to enter the ground. The posts were set in cold clay soil. In the spring of 1872, it became necessary to move the fence, and on taking up the posts, 95 per cent of them were perfectly sound.—*Agricultural Report for 1874.*

A writer in the third volume of the *Southern Planter*, says, old field pine posts if properly prepared, will last as long as locust or any other timber. Take a drawing knife and draw off the bark as the tree stands, as high up as you want to use it, the tree will not die, remains a twelve month when, in consequence of the sun's having drawn the rosin to the surface, it will become a solid bulk of light-wood, and will be ready for use.

In the fourth volume of the *Southern Planter*, there is a drawing and direction for making a movable fence, which, for cheapness and economy, commends itself to the farming community.

I presented a friend with the August number of the *Planter and Farmer*, requesting him to try and get a club of subscribers. [We are sure that our venerable correspondent intended this paragraph as a suggestion to others to do likewise, which we hope they will not be slow to imitate.—ED.]

I have often thought that agricultural correspondents should refrain from larding their communications with latin, as it is perfectly unintelligible to the great mass of the farming community. We want plain language, so that "he that runs may read"—facts not theories.

W. R. HATCHELL.

[For the *Southern Planter and Farmer*.]

HOW SHALL WE IMPROVE OUR LAND?

I see in your valuable paper a great deal said about improving worn out lands and bringing them up to their original production, which is all good in the old section of country where the old farmers are all settled permanently, and have their good old homes and old friends around them. But, I want to reach another class who have very little, and who have to get what land that lies within their means; who often have to go out in the poor pine flats where they can get plenty of timber to fence and wood to burn; but this land is very poor, and has to be cleared and manured from the start to make crops that will pay for cultivation. Now, I want to know what is the best way to make these lands produce paying crops? Five years ago I was forced to go on such land; had fourteen acres of old fields to begin with; had the balance to clear and fence, and then to manure it

before it would make crops that would pay for cultivation. The fourth crop I made a little money; had a very hard time; got in debt, and will take two or three good crops to pay out. So you see what a man will have to encounter who starts in the woods. It will take about eight years before he will begin to realize any money.

But there are many men who prefer starting in this way. My farm is only a two-horse farm. Now I will give you the amount in cultivation: 85 acres are under fence; have this amount in nine fields, all numbered, and good cross fences and gates to each field. My buildings are located in the centre of my farm, so I lose very little time in going to work and putting in my crop. This is one of the reasons I preferred starting in the woods, so I could locate all my buildings with an eye to convenience and comfort, and have everything so arranged that I could overlook all in a very short time. Now for the proportion of my growing crops: 25 acres in corn, all planted 3 by 7, with a row of ground peas in the middle; at third working of my corn, planted field peas between the hills of corn; so I have three crops growing on the same land, all well manured with home-made manure; 25 acres in cotton, well manured with home-made manure; looks well to date; 4 acres in sweet potatoes, all looking well; 3 acres were in oats, which made 35 bushels per acre; 5 acres in rice; $\frac{3}{4}$ acres in sugar cane, which is good up to date; $\frac{1}{4}$ acre in tobacco, all gathered, and have a good crop coming from the suckers; $\frac{3}{4}$ acres I manured very high and planted in speckled peas, of which I have been improving the seed. I cut the peas off the 15th July and cured them for forage; made 6,000 pounds, and have another crop growing on the same land, which looks very promising. I have taken in 20 acres this spring, which is planted in peas, and promises to make a good crop. So you see I have divided my crops in such a way as to have something that will hit the seasons; and I would advise all farmers to diversify their crops, as it will not do to risk all on a single crop of anything.

I see many articles in your journal about sheep. I have built me a good sheep-house, and have twenty-five head to start with; will try them. I have a fine Devon bull and some fine half-breeds. I made last winter and fall sixty tons of good manure, all under shed. I have prepared to make manure at home. My opinion is, that our Blessed Creator has put in the reach of all men who till the soil the means whereby we can enrich our lands, if we will only take the trouble to avail themselves of them.

I would like very much for you, or some of your valuable correspondents, to write an article on how to improve original poor land—land that has a good clay subsoil, eight to ten inches of top-soil, and very firm, but which seems to be dead; will not pay to cultivate without manure, but will make good crops when fertilized.

Last year I made half a bale of cotton per acre all over my farm; eighteen bushels corn per acre; manured three acres high in oats—made fifty bushels per acre.

I will now give my plan of making the manure which I used this

year: In the first place, I have a good and large manure-house. In the summer I take all hands and go out in the woods and rake up the straw, and cover with the top soil, in heaps of about one load: let it stand until winter. Now for the ingredients: 10 bushels of green cotton seed, 320 pounds: 100 pounds salt, 100 pounds of land plaster, 740 pounds good stable manure, 740 pounds scrapings from the woods. This will make one ton, which cost me about \$9 per ton. Now I want your views, or some of your correspondents, about this manure.

Alabama.

W.

NOTE BY THE EDITOR:—If every man in the South showed the vim of this piny old field farmer, as he is pleased to call himself, we might snap our fingers at fortune, and look to a future of assured independence. His observations are certainly suggestive, and we regret that our limits only permit us to consider them very briefly. He need not look with a jealous eye at the old farmer, for he will probably beat him, and beat him badly, if he keeps on as he is going now. He says it will take eight years to *realize any money* on a place like his. Now, he has been only five years at it, and has realized a living for his family, put up his buildings, fenced in well his land and stocked it, and from its productiveness now, as compared with what it was when he took it, its value is more than doubled. If that is not realizing money, we are at a loss to know what is; in fact, there is no business within the range of our observation that has realized or will realize it as fast. We hope he has the blessing of a dog-law, and that *votes* are not so precious there as they are in Virginia, otherwise, his sheep would most assuredly come to grief. If there is any one thing that the average Virginia law-maker is peculiarly sensitive about, it is the dignity of the ballot-box as it bears upon the sheep question. As provision by the majesty of the law is simply hopeless in this matter, we know of no substitute more effective than small bits of fish, well sprinkled with strychnine, dropped here and there around the field where the sheep are kept. This would be effective in another way: dead dogs are excellent additions to compost heaps. Our friend asks about improving "original poor land." Men masticate their food; plants can live only on spoon viands: in other words, their food must be presented *in solution*. Soils are composed mainly of disintegrated rocks, and this disintegration was the work of ages; for, with the Almighty, time is practically no element. Much of this material has reached a condition to enter into combination necessary to the growth of plants, and as long as it lasts, plants may be readily produced. When this is exhausted, we say the land is poor, and it is, in *available material* and that only. We have, at our command, something that will *induce* a fresh supply: *that something we call MANURE*; and without its liberal application, the land may remain poor forever, or rather until nature shall have a chance to make available some new material, and this no man can afford to wait for. The office of manures, either chemical or domestic, is mainly to assist in working up for use the crude materials of which the soil has an unfailing store, adding, at the same time, such kindred material as they may themselves possess. If our friend will keep putting on his land what he shows he knows so well how to husband, his "original poor land" will soon show him that it was really an aristocrat in disguise. His recipe for compounding his manure is simply first-rate; but all the world has'n't cotton seed like he has. They give him both potash and nitrogen in abundance.

We commend most heartily the example of our friend. A man who cannot

take care of himself ought to have a guardian, and we have yet to see the first farmer giving his affairs the unremitting attention peculiar to business in town, who has not become independent, and at the same time been able to live in such comfort as few city men aspire to.

[For the Southern Planter and Farmer.]

“DOG TAX.”

On page 377 of July number of the *Southern Planter and Farmer*, appears an article under the above heading, in which the writer remarks, (and truly too), that experience has proven that no candidate can be elected to the Legislature, generally, who expresses sentiments favoring a dog tax. Now, Mr. Editor, in the beginning let me say, that I am in favor of such a tax, and a heavy one too, but I am opposed to having it applied, as the writer of that piece proposes, for two reasons, viz: I am opposed to it, first, because I do not think it right to tax one man to pay for another's sheep. Secondly, because, if our legislators place a tax on dogs for that purpose, we will have no tax on dogs, for when left to the vote of the people it will be voted down. I think the right kind of a law taxing dogs can be framed, and that it will receive the approval of a large majority of the voters in the State, which would prove as beneficial to the farmers as one in which the revenue were to be used in remunerating them for the sheep which might be killed by dogs. Suppose our next legislators put a tax of, say \$2 upon each dog, exempting none, and having the revenue placed to the credit of each county, that may have been raised on dogs in that county, for the purpose of carrying on the schools. Now don't you think that when it comes to be adopted by the vote of the people, the farmers could appeal to the negro to vote for this law with the almost certainty of getting his vote, because the money is to be used to educate his child or help to do so. Whereas, if the revenue raised by the tax is to be applied to paying the farmer for his sheep, don't you think he, the negro, would be justifiable in saying to you, no sir, I don't intend to vote a tax on myself for your benefit, when I receive none from it. I would be glad to see a tax placed on the dog and shall vote for such a tax if an opportunity is ever given me, but I do not intend to sanction class legislating, and I think, that to pass such a law, if not legislating for the benefit of one class to the detriment of the other, is as near as you can get to it not to do so. Let us get as many good laws passed by our next Legislature as possible, with as few bad ones as possible. Allowing the revenue raised from the dog tax to be used for school purposes, would in the end, yes, and the beginning too, be beneficial to the farmers, because they would be relieved of the present tax on their property for school purposes, for there would be enough money raised by the dog tax to carry on the schools more successfully than has been done in the past. Hoping these remarks may be the means of eliciting others from the pen of one who is better qualified to write upon the subject than I and who can do it *justice*, I will close.

“KEASTAR.”

Culpeper County, Va.

[For the Southern Planter and Farmer.]

LABOR QUESTION.

Perhaps no question has arisen during the last decade, that effects so many people and elicits more discussion than the labor question. It is, and has been, for many long years, the all-absorbing topic. It has drawn out the pen of the most able writers, but no satisfactory solution of the question has been arrived at. There are almost as many different theories as there are men. Some think that immigration is the panacea for all our troubles. I would welcome with open arms all good citizens, no matter from what clime they may hail, but to introduce by tens of thousands paupers (made so in many instances by indolence and idleness) from the four ends of the earth, would not only be impolitic but detrimental to our best interests. A large majority of them would be employed in the production of cotton, the production of which is already so large that the toiling millions who produce it can scarcely keep soul and body together; still it is the remedy for low prices and hard times—so say some. But in my humble opinion a greater misfortune could not befall the Southern people, would result in strikes and bread-riots to which the Southerners are strangers.

Cotton requires close, constant labor, and a strike would be fatal to its production. After seeing every class of labor tested, my deliberate opinion is, that the negro is superior to any for a cotton, rice, or tobacco country. We have an abundance of labor for agricultural purposes, rather more than is profitable; still the cry goes up from every quarter, more labor.

Suppose, brother farmers, our labor was double what it is, in the South, would not our cotton, rice and tobacco crops be largely increased, and would not prices be decreased in the same proportion that the crops were increased? Most assuredly they would. The truth of this proposition I don't suppose will be doubted by any one. Now, if the premises be correct, a moment's reflection will convince any practical mind that the increase of production in our staples, consequent upon an increase of labor, will result disastrously to the farmer.

For example. Suppose A works ten hands and makes 50 bales of cotton and realizes 15 cents per pound, would give a gross income of \$3,000. B works twenty hands and makes 100 bales cotton, and realizes $7\frac{1}{2}$ cents per pound, would give a gross income of \$3,000. Now, which has, A or B, expended the most in the production of their crops? B's expenses for labor, board of hands, wear and tear of land, mules, farm implements, &c., are just twice as much as A's, and his income the same. This partially illustrates the effects of an over supply of labor and cotton.

The supply of labor is ample. All that is necessary to relieve our country of many grievous burdens is to employ one half of the present supply in producing corn, small grain, clover, grass, and stock. Cover the hills with herds and flocks. Improve the better lying

lands, and substitute machinery and improved implements for labor when we can. This done, our country will rise up, Phoenix like, and become the admiration of the world. But let our country be overrun by foreigners of a low type, they will not only become a burden, (as they are in many parts of the world), but will endanger the peace of the country.

The difficulties that lie in the way of procuring the necessities of life, increase with the population. So let us endeavor to be content with what labor we have, and realize, if possible, that we have the best average country in the world. W.

Union County, S. C.

[For the Southern Planter and Farmer.]

CONDITIONS AND AGENTS MOST FAVORABLE TO PLANT GROWTH.

The advantages of the combined efforts of the agents of plant growth is a subject of the greatest interest. Some of these agents or factors may be enumerated as follows: First, the proper constitution of the soil as regards chemicals. Second, its mechanical condition, the depth of the plowing and thoroughness of pulverization. Third, the temperature of the soil and air. Fourth, the efficiency of the drainage. Fifth, the supply of water at proper intervals. Sixth, the character of the tillage, that is, the frequency and care with which the plowing and hoeing is performed. Seventh, the proper space and room for the plant. Eighth, the purity and soundness of the seed used. These eight agents or factors, if not indispensable, act an important part in the development and character of the crop, and their united effect conduce to what might be properly called "*high-farming*."

How these factors act, on what soils, and what amount of influence they exercise on plant growth, are questions difficult of solution, and their extreme complexity has ever bothered the agriculturist. His greatest powers and experience will not enable him to solve these questions satisfactorily, or to arrive at definite conclusions. Without a knowledge of the minerals or chemicals that exist in the soil, the farmer may supply ingredients that are already there, or he may use fertilizers that contain properties directly opposite to those that are wanted.

Although the analysis of soils affords valuable information, yet they are not entirely reliable; and, in practice, do not always work well. If by *actual experiment* the farmer *knows* what is needed in his soil, he can proceed with confidence and command success. This experimental knowledge, however, takes time, but the deductions are reliable.

If it is not practicable to secure all the factors above enumerated, he should avail himself of the advantage of as many of them as possible. He should recollect that the farm itself affords those of the most value, if properly secured and applied. The mechanical condition

of the soil is under his control—so is drainage—the character of the tillage—the space or room for the plant—the soundness and purity of the seed—and the various elements.

As a means of increasing the accumulation of domestic manures, which are the base of fertilization, we can employ phosphates and other bought manures to increase our crops of corn, hay, straw, &c., which will enable us to raise and keep more horses, cattle and sheep, and thereby add vastly to our heaps of manure. As a means to this end the phosphates are worth all you pay for them. Don't let us discard commercial manures because some dishonest manufacturers have cheated us. Let us patronize men we know to be honest, and buy as liberally as our means will allow or necessities require, using only such as we *know* are effective in our particular soil.

These suggestions may appear supererogatory to some, but we think our farmers, as a class, need "line upon line," and there are numerous beginners in husbandry who may and will be benefited by communications of this character. We feel and hope the agriculture of the South is progressing—that our native State is becoming as she should be among the first in agricultural development and resources.

J. FITZ.

Albemarle County, Va.

NOTE BY THE EDITOR:—To our mind, nothing is so full of substantial hopefulness as the inquiry now so generally prevalent among the farmers of the State. The time is quite gone by when, in our management, we can do as our fathers did. We live in altogether different times, and we must accommodate ourselves to them, or dwindle into absolute nothingness. Spending one's time at the grocery, and groaning over past losses, will never do the work. What is gone is gone, and to allow the recollection of it to engross *any* portion of the short span allotted to us in this world, is as absurd as to urge a claim that cannot be enforced.

[For the Southern Planter and Farmer.]

SMYTHE COUNTY FARMERS' CLUB.

Club met at the residence of Mr. Jno. L. Saunders. President Jno. M. Preston, in the chair. Fourteen members present, and four absent. No other business claiming precedence, committee on examination of farms visited last month, presented their report, which was read by the Secretary, received, and ordered to be placed on record in its appropriate place.

The farm visited in July is known as "Aspenvale," owned by Mr. C. H. C. Preston, and is superior in its adaptation for grass and grain. The duty of the committee was most faithfully discharged by close scrutiny in the affair and management of the farm and its attachments.

The farm visited to-day is also one of the best in this section, and thoroughly managed by its owner, Mr. Jno. L. Saunders. Committee for its examination have a good field for a trial of approving criticism.

Mr. Jas. M. Byars, appointed at last meeting as the member for selection of subject for discussion, though himself absent to-day, furnished through the Secretary a short essay on the question, "Does Plaster Impoverish the Soil?" The enquiry he regarded a difficult one to answer, and selected rather with the hope of directing the attention of future observers amongst us, than with any expectation that a definite conclusion will be reached at present.

That plaster, in itself, is not a fertilizer—nothing more than a stimulant to the soil, has, for a long time been maintained by many of our acquaintances; and if it is so in fact, then indeed is it a veritable curse to the farmer. For many years he (Mr. Byars) had sown plaster freely—in fact, largely—and on various kinds of soil, but in no instance has he seen any thing that led him to believe it in the slightest degree injurious. Often there has been no observable effect—whether because of an inferior article sown, peculiarity of soil, or unfavorable season, he had not known. Had often seen its effect on wheat in spots where it had been dropped in corn-hills the previous year. That its influence is not limited to the present year is shown also by an experiment at Saltville, where, on an old piece of pasture land, the word "plaster" was written in the hillside by sowing thickly a narrow strip of plaster in the form of letters. This is yet plainly visible from a distance, although four or five years have elapsed since it was sown. This shows plainly that quantity had much to do with its effects, and that it endures longer than the first or second year. True, the quantity sown on any given area of land might be so large that further additions could not be beneficial, but hurtful; but the same applies to every fertilizer. Barn-yard manure might be used in excess.

In what way plaster acts upon vegetation or soil is an unsatisfactory question, even to the chemist himself; and while we dare not venture but a little way into the domain of the alchemist, we must accept his teachings, however unsatisfactory they may be, until we find something more reliable to which we may pin our faith. Chemistry, though an exact science, is constantly progressive; and when applied to agriculture, must be taken in all the complexity of its nature—with its indefinite and endless forms, and the incessant changes that are constantly going on in the great chemical laboratory of nature.

We are taught that plaster has two main sources from which they draw the necessary elements of nutrition for their perfection and growth; namely, the soil beneath and the air above. The former contains, in addition to humus, the bases, such as lime, potash, silica, phosphorus, &c.; the latter, the great acidify principle, which acting upon these bases fit them for use, either directly or indirectly. *Directly* when they enter the roots of the plant, and become a constituent part of it; *indirectly*, when through its action direct sources of nutrition are supplied. Thus phosphoric acid is said to enter the root and help to form the protein compounds of the grain, being *direct* in its action; while lime, acting upon certain felspathic rocks sets

free potash and silica, and decomposes certain organic compounds which liberates or sets free available nitrogen ready for use by the growing plant. In this, perhaps, we have the main benefit arising from the application of lime in whatever form it is used—the liberation of nitrogen from conditions in which it is not assimilable by plant life, and rendering it available.

A piece of land apparently exhausted, is not always so in fact, but has locked up in combined unassimilable form a large amount of nitrogen, or other plant food, which needs only lime for its liberation that it may form appropriate nitrates. At one time it was thought that growing vegetation, particularly clover and other leguminous plants, draw from the atmosphere carbon and nitrogen to aid in its growth and support, but that is now believed to have been, at least in part, erroneous; and that plants are unable to extract one particle of gaseous nitrogen from the air, but get their supply from it in combined form. It is still conceded, however, that the large quantity of carbon used by plants comes mainly from the atmosphere, through decomposition of its carbonic acid by the plant during its growth. Here, if this reasoning be true, we have a striking instance of that beautiful reciprocity of action in nature. Lime in the form of sulphate or plaster, acting upon sleeping combinations of nitrogen, liberates the gas which seizes upon a base and gives the plant a nitrate upon which it feeds, and while growing, it imbibes from the air carbonic acid, which being decomposed by the plant itself, the carbon is deposited and becomes a constituent part of its substance. The plant moving through a series of action arrives at maturity, and in turn dies and goes back to the source from whence it came.

But the office of plaster does not cease here. Having set on foot a series of action, decomposition takes place with it, the sulphuric acid going to perform its role in vegetable growth, and part of the lime *directly* to the plant to aid in the elaboration of its grain and stalk; a part of the sulphuric being found also in the stalk.

In matters like this we are met at every turn by questions that are hard to overcome. Our experience of the scientific principles upon which these changes are based, our want of systematic observations extending through a number of experiments, in addition to our inability to bear the necessary expense involved in these investigations, necessarily retard anything like a general advance in the proper knowledge of a subject of so much importance to the agriculturist.

After reading the essay, a brief discussion took place between Messrs. Hull, Baker, and Saunders.

Mr. Jno. L. Saunders does not think plaster a fertilizer in itself, the chemistry of the question to the contrary notwithstanding. He has always regarded it merely as a stimulant. Where the soil contains necessary plant food, plaster compels the production of a crop at the expense of the supply in the soil. Take this crop off, leaving nothing and the land is poorer than before. Nothing is comparable to good stable manure. With it, a poor, naked bank can be made to produce for years with no other application. With plaster alone

this cannot be done. Does not believe that plaster ever does anything for the plant directly, and we certainly cannot fertilize with plaster alone.

Dr. C. H. Baker suggested, though it may not be *directly* a fertilizer, is it not equally valuable by being *indirectly* so? If it stimulates plant growth and we leave this heavy accumulation of green matter to go back to the soil, the land is thereby improved, and the improvement is due to plaster.

Mr. D. D. Hull coincides fully with the views expressed in the essay. Believes plaster to be, in itself, our best and cheapest fertilizer. Had made some observations during the present year, which, in connection with an instance cited in the essay, of letters being written at Saltville by growing grass after strewing plaster thickly over the sod, led him to the conclusion that we have never sown enough. Last spring, having on hand a lot of wet plaster, he decided to put it upon the barren spots, in an old piece of land, where he had been sowing plaster in the ordinary way for several years, with no visible effect upon these places. The plaster was hauled out and shoveled from the wagon thickly upon these galled places. Now, the best grass is here upon these formerly nearly barren knolls. This is conclusive to my mind, that the old idea, that one bushel per acre will do as much good as two is a mistake. Stated further that he had never failed to get a crop of grass, except in one instance, and that was on a piece of land where, by mistake, he failed to sow plaster. Always sow the grass seed and plaster at the same time.

After transacting some unimportant business, Club adjourned to meet at Mr. D. D. Hull's on the third Thursday in September.

[NOTE BY THE EDITOR.—This record is exceedingly interesting, and is a fine example of the benefit flowing from an interchange of opinions by farmers in the same neighborhood. It equalizes experience, if we may use the term: it goes farther, it makes each man think more, and observe better than he did before, and when this is secured, improvement is half accomplished.

It is reasonable that the soil should be a complex organism inasmuch as its office is to sustain all the others. The chemist is only able to get a partial insight into its mysteries, certainly not enough for him to lay down any laws, in respect of its treatment, of absolutely general application. His analysis reaches, as he conceives, its ultimate elements, but those, in part at least, now esteemed simples, may and probably will be found in the future to be compounds. Since the days of PRIESTLY, nitrogen has been a problem, and it has by no means been solved yet. In the meantime, practical men must live, and it is due to them that their work should bear the best fruit attainable. To effect this, we are disposed to believe that they cannot do better than act on the principle that has always been observed in the treatment of the human frame, namely, *experiment*, and use what the constitution of the soil shows is most beneficial in the long run in its effects.

Plaster has been long a fruitful theme of discussion, and we have no knowledge of any explanation better than that urged by Mr. BYARS. We *know* that in certain localities, and they are not few, it makes the grass grow, and that is no mean thing; for the grass, if properly utilized, will make something else of value grow. The thing with us all is to produce better crops, and while availing ourselves of all that is accessible bearing upon their conduct, we can, during their growth, ourselves investigate the causes which induce the result.]

[For the Southern Planter and Farmer.]

RECLAIMING OUR LANDS.

What shall we do to make poor land profitable? A crop of winter oats sown the last of August or first of September will pay on poor land; and if the same lot is continued every year for five or six years, every year the crop will get better, says my neighbor, who has tried it; and although the last winter was the worst I ever knew, yet his crop was splendid. Is it not evident to every farmer that a good crop of oats will pay better than wheat without a fertilizer? Take notice, it must be winter oats, sown in August or September. If the first year's crop were turned in before they ripened, a very large crop may be expected in June next year. My neighbor's oats are all up; they were sown the last week in August. And now as the farmers are going for sheep, an excellent winter pasture may be secured by mixing rye and winter oats, sown at the time above mentioned. If any farmer wishes to kill out wild onions, let him try the above plan, and at the end of the fifth or sixth crop they will disappear. The oats ripen before the onions mature, and fallowing in the summer five or six years in succession is likely to put an end to them. Spring oats were supposed to impoverish land, because weeds did not grow after they are cut. The seed of weeds mature in the fall and early winter, and are scattered by the winds on the surface of the earth; in the spring they are buried too deep to spring up. The land in the spring is often too wet, and many have not patience to wait for drying weather.

Clover is a very good thing, but clover will not grow on poor land; and if it did, not one summer in five can it be turned under, on account of the drouth; but oat stubble can be fallowed in the very dryest summer.

I was glad to read the communication from Gov. Smith. It cannot help doing good. The Albemarle farmers have lost so much by it (sulphate of potash), they are all to a man against it. Suppose the Governor try three lots of Irish potatoes. Put on the first lot the carbonate of potash; on the second the sulphate, and on the third nothing. Wherein would the second differ from the third? Very little. I take Irish potatoes because they have a great deal of potash in them, and every farmer knows that ashes from green white oak is a splendid manure for Irish potatoes. I know a farmer that has plenty of the sulphate of potash in the rocks on his land. He put on that very land the carbonate of potash at seven cents per pound; and the merchants in Richmond asked him how he came to make such fine tobacco. Every farmer around went to see it while it was growing.

Mr. Baker, of New York, speaks highly of a fertilizer that he calls "natural potash." Can you tell what he means by natural potash? On the Lynchburg road, five miles from here, the rocks look as if one-third was potash.

Albemarle county, Va.

JAMES FIFE.

[NOTE BY THE EDITOR.—We have not seen Mr. Baker's advertisement, referred

to by Mr. Firz, but we presume the "*German Potash Salts*" is meant. when the term "natural potash" is used. These bear the general name of *Kainit*, and are found in the rock salt deposits at Stassfurt and Leopoldshall in Germany, and are largely used in this country and Europe as manures.]

[For the Southern Planter and Farmer.]

FARM NOTES AND ITEMS.

THE VALUE AND USE OF COMMERCIAL FERTILIZERS.

For four years I have been engaged in farming in Virginia, and each year I have used more or less of what is known as commercial fertilizers, and I propose to give some of my experience, hoping thereby to benefit others who have not experimented as I have, or who have not noted the results as critically.

In 1872 I was of the opinion that I could take any kind of soil and by properly preparing it and applying a large quantity of bone phosphate, rich in ammonia, produce a large crop, even supposing the soil, without such application, was absolutely barren. I don't think so now. Repeated experiments have convinced me that in soils destitute of vegetable matter excessive applications of fertilizers will do no good, except for some few special crops. Upon very poor land from 200 to 300 pounds per acre is as much as can be profitably applied to a grain crop, and even then much depends upon the season. Upon turnips, super-phosphate will pay when applied to the poorest soil at the rate of from 500 to 1,000 pounds per acre; and I have raised as fine cabbage as I ever saw on poor, sandy land, by an application of 600 pounds per acre.

As a rule, bone phosphates have given me better satisfaction than fish guano or, indeed, the Guanape or so-called Peruvian guano, while upon adjoining farms the Pacific and Guanape have acted perfectly satisfactorily. My land is gray, while the other is red. I have used Powhatan Raw Bone, Gilham's Fertilizer, Moro Phillip's, Edward's Super-phosphate, Baugh's Raw Bone, and Andrew Coe's, all side by side, and could never see any material difference in the yield. In 1872 I used Powhatan Raw Bone and Pacific, side by side, in equal quantities, for ruta bagas. There was no appreciable difference in the crop. The succeeding year the same land was put in cabbage and rape, the rows running across at right angles with the ruta бага rows. The whole was equally manured with stable manure. The cabbage growing upon the plat where the Powhatan was used were at least double as large as where the Pacific was used. I accounted for this difference by the fact that the Pacific, though rich in ammonia, was deficient in phosphate, and the Powhatan, being rich in bone phosphate, supplied the deficiency in the stable manure, while the manure furnished all the ammonia the crop needed.

I have found that the application of 200 pounds each of Pacific and Powhatan or Gilham acted better than an application of 400 pounds of either alone. Phosphates pay well on land rich in humus, or used in conjunction with farm-yard manures. Last year I planted

two acres in ruta bagas, using Gilham's Trucker, Powhatan Raw Bone, and Guanape guano, equal quantities by weight, in rows running side by side, the whole at the rate of 500 pounds per acre. From the very start the Guanape took the lead in appearance, the Trucker next, and the Powhatan very far in appearance behind either. The three plats were harvested separately, piled in the field, and the tops cut off, when the difference in the quantity of roots was so slight as to be attributed simply to the difference in the stand. The plat manured with Guanape, however, gave more tops than both the others put together, while the Trucker gave more than double the top the raw bone gave. The Trucker gave about five per cent. more root than either of the others, and the roots were smoother and more even in size. The roots upon the plat where the Guanape was used grew more out of the ground than any ruta bagas I ever saw, while those upon the Powhatan were too deep in the ground to pull easily.

Last year I used Powhatan and Gilham's Old Dominion side by side on corn; applied to the hill at the second working, at the rate of 200 pounds per acre, over six acres of land. The yield was perfectly satisfactory and appeared about equal; but owing to the fact that the chinch-bug worked on the corn in spots, no comparative measurement could be made. About two acres adjoining was left unmanured, and though naturally the best land, did not yield more than half as much as that where the phosphate was applied. This year the same land is in peas, drilled in. Where the phosphate was used the vines are very rank and full of peas, which are ripe—picking them to-day (September 10th); while upon the part where no phosphate was used the yield, either of vine or peas, will not be more than one-half, and there is scarcely a ripe pea upon the vines. Phosphate applied at the rate of 100 pounds per acre, in the drill, with peas, will pay better even in the yield of peas alone than with any other crop on which I have ever used it. Upon the poorest sandy soil this application will give an immense crop, both of vine and grain, which, fed down to hogs and plowed in, will pay twice over in the way of feed, and be equal to a good dressing of stable manure for the improvement of the land.

PEAS AS A FARM CROP.

The necessity of some fallow crop that will grow upon poor land, and the production of which will not cost too much, or that will yield an immediate return sufficient to pay the cost of production, has been the great want of the Virginia farmers. Yet strange as it may appear, almost every farmer in the State has been growing, year after year, as a table vegetable, a plant that meets this want in every particular, and yet few, very few, comparatively, have ever availed themselves of its most valuable qualities.

Mr. Ruffin, I believe it was, who first introduced the pea as a fallow crop into lower Virginia. He wrote and published a most exhaustive essay upon the subject of its culture as such, many years

since (an excellent resumé of which has recently appeared in the *Farmer and Planter*); but neither his writing nor example, nor that of Mr. Sampson and other model farmers of the State, who have been constant in their praises of the pea, have had the effect of bringing it into general favor among Virginia farmers. The idea has gotten hold on the public mind that it is a good thing, but a costly one, and only to be indulged in by large and wealthy farmers. It is true that, when considered simply as a preparation for wheat, without calculating on any immediate return except through the increase of the wheat crop, the outlay of money and labor might form a considerable item; but I am confident that a return much more immediate, and even, if possible, more valuable, may be realized by our farmers if they will only be at the pains to avail themselves of it. If the small farmers of Virginia would give one field to the pea, to be drilled in with 100 pounds of super-phosphate to the acre, and, after maturity, fed down upon the ground by hogs, the pork realized would more than pay the entire expense of the pea crop, and leave the land in almost, if not quite, as good condition as if the entire crop had been turned under, for everything would be left upon the land—except that carried away in the form of fat.

I am satisfied that an acre of good peas will make at least 100 pounds of pork, which will pay all the expense attending the crop twice over. A very large portion—I believe fully half—of the farmers of the State buy more or less bacon or lard every year, and any system that would insure an abundance of these commodities produced at home would be a long step in advance of the present. I have raised the black pea for three years; it is an immense grower and yields a good deal of seed, but I don't think it is as good as the Shoney pea, which is more prolific and at least two weeks earlier. I am also growing the Japan pea this year, and hope to report result this fall.

CHESTER.

[NOTE BY THE EDITOR.—This is a model report; and there is an “experimental station” which has manifestly borne good fruit to the operator. Why should it be confined to him? A farmer looks to his land for his living, and for something to be laid up for his children; because every man naturally desires his children to be provided for, when he leaves them, at least to an extent sufficient until they can take care of themselves. He then cannot possibly know too much about his business, and he is not wise if he consents to gain his wisdom *solely* from his own experience. *He is a wise man who adds to his own the experience of everybody else.* So, he must *read* as well as *work*. His Maker never designed him to be a mere drudge, but to enjoy rationally the fruits of his labors. If by inquiry he can ascertain how he may accomplish the end he desires with less labor than before, he has gained that much time for enjoyment, and sugar is as necessary in this world as salt.

Our correspondent says that, as a rule, phosphates (ammoniated) have given him better satisfaction than either fish or Guanape guano. This is not unreasonable. The investigations, specially of WAY and VOELCKER, have thrown a flood of light upon the absorptive power of soils. In respect of ammonia, clay, loamy and calcareous soils, show a maximum power of absorption, and sandy

soils a minimum. Fish, either fresh or in scrap, decompose in the presence of heat and moisture, with great rapidity, and the resulting ammonia is absorbed in proportion as the soil answers to the above conditions. In Peruvian guano (of which we have now only Guanape,) while the ammonia is almost wholly potential, the best Chincha showing but $1\frac{1}{2}$ per cent. of ready-made ammonia, still it is so rapidly developed, after application to the soil, that without the presence of conditions that will provide for its absorption, there will be, as with the fish, an escape of a considerable portion. In the ammoniated superphosphates, other sources of ammonia are resorted to, and chemical treatment prevents its escape; hence articles showing, by analysis, a much smaller per centage of ammonia than either fish or Peruvian, give very much better results in the field. Besides, what they lack in ammonia they usually make up in phosphates, potash, magnesia, &c.

We are glad to see our correspondent go so fully into the value of the pea crop. It is quite plain that a man is not wise to pay for what he may honestly secure without pay. He needs, only too generally in Virginia, vegetable matter in his soils. It gives him good material directly for the use of his crops, and effects chemically the mineral elements of the soil so as to render them the sooner available. Nature comes in to rectify his bad management, for it has provided the pea and the clover, with which to supply his loss of vegetable matter, and that too with a minimum of expense to him. The atmosphere and the rain do the bulk of the work in the production of these plants. Why then refuse such a gift? If any one wants to see what the pea can do towards redeeming worn lands, let him visit the magnificent estate of Maj. SUTHERLIN, near Danville. All this has been the work of comparatively few years, and demonstrates fully the "come out" of our Virginia lands. With such a foundation to build on, the future need have no gloom for any of us.]

TEN RULES FOR FARMERS.

1. Take good papers and read them.
2. Keep an account of farm operations.
3. Do not leave implements scattered over the farm, exposed to snow, rain and heat.
4. Repair tools and buildings at a proper time, and do not suffer subsequent three-fold expenditure of time and money.
5. Use money judiciously, and do not attend auction sales to purchase of all kinds of trumpery because it is cheap.
6. See that fences are well repaired, and cattle not grazing in the meadows or grain fields or orchards.
7. Do not refuse to make correct experiments, in a small way, of many new things.
8. Plant fruit trees well, care for them, and of course get good crops.
9. Practice economy by giving stock shelter during the winter; also good food, taking out all that is unsound, half rotten or moldy.
10. Do not keep tribes of cats and snarling dogs around the premises, who eat more in a month than they are worth in a life-time.

[For the Southern Planter and Farmer.]

LETTER FROM ALABAMA.

[We take the liberty of publishing the following private letter. We like the suggestion that correspondents write over their names, and hope our correspondents will do so if there is no special reason for doing otherwise.]

If you keep up the *Planter and Farmer* to the present standard with its low price you are certainly entitled to the aid as well as the thanks of every good citizen. There is another feature connected with your journal that I like very much. Most of your correspondents write over their own proper names or initials, and I hope the day is not distant when it will be the rule as a general thing. I know it sometimes subjects the writer to considerable annoyances, but I do not regard that as a sufficient excuse. When I read good communications and come to the signature, "Acorn" for instance, I feel disappointed. I am indebted to him for the favor he has bestowed on me, and if I knew who it was I would love and esteem him for it, but I do not know who he is, nor where he lives, consequently I feel disappointed. I am unable to discharge my duty to him, because he, as I think, has not discharged his duty in signing the word "Acorn" instead of his own proper name. Besides there is great responsibility resting on the man who writes for the public, and I think he ought always to shoulder the responsibility by signing his own name and place of residence to his communications. There are many reasons why correspondents should sign their names; and most, if not all, of the objections to that course, might easily be removed in a short time by pursuing the proper course. Our ground is still dry and parched, and the cotton is nearly dead in some places, but there is now a very good prospect for rain. The cotton in many places is nearly all open, and if it does not rain soon, it will all be opened in a very short time.

M. H. YELLNER.

St. Clair Co., Alabama.

[For the Southern Planter and Farmer.]

REMARKS ON DITCHING STREAMS.

To-day I chanced to pick up your number of September, 1874, and read the article of your esteemed and lamented correspondent, Dr. Gillespie, on this subject.

As farmers need "line upon line, and precept upon precept," and withal, precept enforced by example, I should not regret to see this article republished in every newspaper in the State.

I can add little or nothing to the lessons it teaches, but would reiterate the necessity of reclaiming our best lands, now so extensively abandoned to malarious swamps, would endorse the method of Dr. Gillespie—that of conforming, to some extent, to the natural course of the stream, as determined by depression—and confirm his experience that the operation pays most liberally.

I will give a bit of my experience—farmers easily pardon this sort of egotism.

Some years ago, I cut a ditch one thousand yards long, ten feet wide, five feet deep, through hard and stumpy ground, at a cost of

\$190. I am sure it paid in the first crop. Besides the cost of ditching, one acre of land cost me \$15 to plant it in corn, but it yielded 60 bushels, has afforded annually one and a half tons of hay, and will beat its first corn crop this year, though damaged by storms.

How many thousands of acres of such lands more easily reclaimed, the potential source of wealth to individuals and to the State, are now left to be converted into jungles and to poison whole neighborhoods with their miasmatic exhalations.

Though it may seem invidious, I must instance the splendid flats on Sinkinghole creek, in Goochland; a granite country, not the richest in Virginia, but, if second in fertility, about first in ease of cultivation—a most pleasant and thrifty section in the olden time.

I have myself seen magnificent crops on these bottom lands, now I am told, almost utterly abandoned.

Now, what is the remedy in this, and the many identical cases within my own knowledge, in the ruinous aggregate throughout the State? The trouble is the want of enterprise and confidence in the results, and, chiefly, the want of means. I would suggest that these difficulties might be surmounted by uniting all the parties interested in an association, managed by the ablest men, with a credit based on the rental of the lands drained, for a time proportioned to the difficulty of the work. Some parties could probably advance money, almost all could make contributions in kind, and on these first and vital aids, a liberal interest could be afforded. Once fairly begun the work would be nearly or quite self-sustaining; that is, the rent of the lands first reclaimed would pay for draining those next above, and so on. It might be so arranged, in many instances, that any proprietor might contract for a section of the work on his own farm, and by increasing his ordinary force, lay by his crop in better than usual time and order, and spend all his time ditching, and thus materially reduce the cost to himself. Of course a competent committee of proprietors should first investigate and report on the practicability of the scheme, for there are often obstacles to success which escape the mere casual observer.

Of these, I suspect the coarse sand from disintegrated granite is, next to the inseparable one of want of fall, the most serious. The writer has never had it to contend with.

The fall of a tortuous and obstructed stream is sure to be underestimated. In my experience already alluded to, a failure was predicted on this ground, yet the fall proved to be in the thousand yards enough to keep the ditch to its full depth at the lower end, though the stream is obstructed below.

In conclusion I would say, had I to do my own work over again, I would reduce the cost materially by the use of coulters and mud-scrapers, and proper tackle to remove stumps and trees.

Per contra, cases have come to my knowledge of ditching to disadvantage; a winding stream, with loose, sandy banks, sometimes overflowed, never washed or “sobbed,” producing finely, has been converted into a little torrent that soon swept off the rich deposits it had left of yore. “Let well enough alone.” T. P. L.

[For the Southern Planter and Farmer.]

LETTER FROM MARYLAND.

The *Planter and Farmer* is worth many times the value of its subscription. You seem to have a corps of excellent practical writers. Whilst there are many erroneous ideas put forth in what is known as book-farming—yet, through the channel of the books the “agriculturist” have, from the efforts of scientific men, through the aid of chemistry, done more for farming within the last twenty-five years and have been set farther ahead than all that old fogysm could have produced in any indefinite time, and to the discriminating mind it is a fruitful source to draft upon.

I am glad to see that the farmers in the Old Dominion seem to be taking the right course of diversifying their agricultural efforts. This is certainly the true course for Virginia as well as Maryland, since we have the great Northwest to contend with in the Eastern markets. I see in your paper, as well as others, one fine source of profit is being looked to, viz: “Sheep Raising.” I have a good experience in this line. Sheep pay a better interest upon the money invested than anything the farmer can engage in; but in the absence of a good sound “dog law” the sheep business is as uncertain as dealing in lottery tickets. I had but a short time since a very fine flock of sheep so demoralized and broken up by the *worthless curs* that I entirely abandoned the business. It is a sad comment upon our free institutions, that, simply because there are more dog-owners than sheep-owners, the dastardly politicians pander to the wishes of the idle, and in some instances vicious cur-owners, because of their influence in the ballot; but there is a better day coming and not far off. Order, organization, and co-operation is what the farmers need. This I fully anticipate will be accomplished, as the spirit for organization seems now to be developing itself all over the country—and the leaven hid away in the lump by the Grangers will bring about this much desired result. It is now generally conceded that the Grange move is not aggressive, simply defensive, and through this spirit they will finally overcome all opposition.

Farming, of course, underlies all other interests; it is of course the master wheel, driving all other machinery.

H. N. LANSDALE.

[NOTE BY THE EDITOR.—It is a pleasant thing to be well thought of, and it is our intention that the esteem of our friends shall not be in vain. We have good writers in our Southern country, and the regret is that so few of them exercise their talent in this way. We hold that *every* man's duty is to the public as well as to himself; in fact, public duty is only another name for his own; for, as it is subserved, his is, albeit it may be only indirectly. As example is always more potent than precept, our educated men are bound by every motive that should actuate a child of the commonwealth to see that what fortune has vouchsafed to them should not die barren, but rather be used to lift up, to better things, those around them who, less favored, would strive to help themselves if they could but enjoy the encouragement of those they have a right to look up to as exemplars of good management and honorable living.

It is a lovely commentary on human progress that, in this acknowledged field of perfect government, the *dog* should be the chief actor. We have always looked upon the question of "the balance of power" in Europe with a certain degree of awe; but *here* the point on which it trembles is *the dog*. We dream of the brotherhood of man, and we see it realized *here*; for suffrage is universal, and its exercise is only free because of *the dog*. If heathen peoples had reason for deifying the dog, we certainly are not without it; for when our Solons (the presumed repository of the most august of all human functions) are in council, bridges across small creeks, relief to sureties on official bonds, grants of leaves of absence, and similar great questions, receive due consideration; *but the dog nerer*; he is too sacred to be named even by profane lips. It is a bitter tyranny against "the rights of man" that non-taxpayers and chicken thieves should not control the property of taxpayers and those generally who build up the State; and the last one of us should be thankful that these down-trodden ones have at their command so many champions, and—all for the small sum of six dollars per day !]

[For the Southern Planter and Farmer.]

DITCHING.

There is no operation on the farm more important than that of ditching, and none more neglected. In eastern Virginia there are immense quantities of branch, creek, and river bottoms not only lying idle and unproductive, but are actually poisoning all the surrounding atmosphere and severely affecting the health of the whole country. These lands might be made exceedingly valuable if they were properly drained and put in cultivation, for a few acres well drained and properly cultivated would yield more corn than whole fields of poor high lands—more especially during a dry season.

The standing excuse for the neglect of this important work is, the want of means and labor. Now, there are numerous farmers who, whilst they make this excuse, are wasting more time and labor in the cultivation of poor land than it would take to drain all the bottom lands on their farms. The fact is, the cost and labor necessary to reclaim these bottom lands are much less than is generally imagined, and are not to be compared with the immense benefits to be derived therefrom.

In locating and running these ditches much judgment and discretion are required, and these are always influenced more or less by the peculiar locations of the lands to be drained, and other surroundings. In the location of these ditches there are two main objects to be kept steadily in view. The first is, to have the ditch as straight as possible; and the other is, to locate it in the lowest places. It is not always practicable, however, to run the ditch straight, and it is not always best to run it in the lowest localities. These depend entirely upon the peculiarities of the ground, and the soundest judgment and the best practical sense should be exercised in determining this matter of location, for the efficiency of the drainage depends in a great measure upon it. The location of the ditch having been decided upon, the next step is to have the work properly

executed. A good ditcher having been engaged, the capacities of the ditch and the price of ditching should be fixed and distinctly agreed upon in advance. And then the master should give the work his occasional supervision, in order to keep the ditches up to the measure, and see that the work is well done, for, if not watched, these ditchers are almost universally prone to draw in their lines and slight their work. The ditch having been completed, the next step is to level down the banks, so that the land may be cultivated up to the edge of the water. When the ditch is small this can be done with the hilling hoes; but if the ditch be a large one, the embankment may be reduced by the use of the hillside plow, aided by a few hoe hands. When it becomes necessary to crook a ditch, the curves should be made as gradual as possible; otherwise the current will be constantly undermining the outer bank of the curve, whilst the inner side is liable to fill up with sand.

The ditch having been duly constructed, the strictest attention will be necessary to keep it in order; otherwise it will soon fill up and become useless. The banks should never be allowed to grow up in bushes, and the sand bars should be cleaned out at regular intervals. The plan pursued by the writer is to have his ditches cleaned out regularly once a year. And in order to keep the weeds and bushes from growing on the banks, our able-bodied men, armed with a sharp brier-blade, are required to go over the ditches twice during the summer season and cut them all down as closely as possible. If this be kept up for a few years a good turf will gradually form on the banks, which will be of great benefit in keeping them from washing, and in some measure prevent the weeds and bushes from growing. It is a well-known fact to all practical farmers, that a straight ditch will fill up sooner than a crooked one; but the philosophy of this strange phenomenon has never been satisfactorily explained. Almost every farmer is ready to explain it with a theory of his own, and with your permission I will give you mine: Happening to cross a small stream a few years ago, I observed that where the current was strong enough the sand was constantly gliding along down on the bottom of the stream, being kept in motion by the force of the current. Observing this, the following explanation suggested itself to my mind: It will be observed that these straight ditches almost invariably fill up with sand instead of mud. Sand does not incorporate itself with water like the soil and form muddy water, but is put in motion by and is carried down the stream by the force of the current, generally sliding along on the bottom of the stream. Now, when a freshet occurs the current in the straight ditch is very much accelerated, which puts the sand in motion, and it continues to move on down the ditch until it reaches a point where the current is not strong enough to keep it moving; here it stops and commences to accumulate, and continues to do so until the ditch is filled up. If a ditch is made perfectly straight, with sufficient fall to keep the sand in motion throughout its entire length, it will never fill up; but this is scarcely ever practicable.

The reason why the crooked ditch does not fill up is, the current is too slow to put the sand in motion, and consequently it is never filled up with sand, whilst it has sufficient motion to carry off the muddy water before the mud has time to settle. Hence, one would naturally conclude that a crooked ditch is better than a straight one. It is not so, however, because the straight ditch is capable of carrying off the water more rapidly, and thus drains the soil more effectually. In order to remedy this liability of the straight ditch to fill up, it must be strictly attended to and the sand thrown out whenever it accumulates to any extent.

In conclusion, I take occasion to repeat that this matter of drainage is one of the greatest significance and importance—not merely because of the great quantity of valuable land to be brought into cultivation, and its salutary effects upon the health of the country, but it would have the farther effect of making the country more attractive to immigrants and greatly enhancing the price of the lands here generally. Farmers here would find it greatly to their interest if they would stop the cultivation of their poor high lands, which do not pay the cost of cultivation, and turn their attention to the reclaiming of these bottom lands; and if they will go at it in earnest they will find the cost and labor much less than they anticipate, whilst the benefits will be astonishing.

Cumberland county, Va.

SOUTHSIDE.

[NOTE BY THE EDITOR.—This is an admirable paper, and we trust the counsel of our correspondent will not go unheeded. We know him to be successful in his operations, and this is the chief, and, indeed, only acceptable credential in any counsellor. Not many years ago, Virginia, except the lower tide-water country, was noted for its salubrity. Now, malarial diseases, and some of them of a very serious character, afflict the country along our water courses, as high up almost as the mountains. Ditches and streams that once received attention are now neglected, and fine bottom lands have, in too many places, been turned into swamps. These give decaying vegetable matter enough, but in the wrong place, and, worse still, something we *must* pay for, and that is the doctor's bill. As a question of mere dollars and cents, it is believed that the money spent in ditching, and therefore in health securing, will not in the long run, be more than we are now compelled to pay the doctor.]

VIRGINIA WINE.

Your paper of June 18th, 1875, contains an article headed "American Wine," copied from the *Pall Mall Gazette*, which gives an account of the proceedings of the Vinicultural Congress, which met at Montpelier (France) in the month of October last, concerning the propriety of introducing American varieties of vines into France. That article says:

"Wine growing is as yet in the merely experimental stage in the United States. There are few vineyards, and the growers are for the most part unskilled. Moreover, the taste of the American consumers require the wine to be sugared and otherwise adulterated."

The first part of that sentence is not quite correct as to the way the business is carried on in some of the Northern and Western States. There are, particularly in the State of New York, vineyards and wine-manufacturing establishments managed by men thoroughly acquainted with the business in its different branches, and worked by skilled labor—establishments which can favorably compete with the most renowned in any part of Europe. The wines manufactured in these establishments find ready sale at remunerative prices.

The quality of Virginia wines shows that the business in that State has been managed heretofore without plan, comprehension or distinct object in view; though it cannot be denied that the traces of what could be realized, with skill and understanding in a climate so eminently congenial to the cultivation of grapes, could not, even under the most defective treatment, be entirely concealed.

The object of the present article is to express my views about some vital questions concerning the grape-growing and wine-manufacturing business, and to drop in some advice for those who have already engaged in the business and those who intend to enter into it.

The business is divided into two distinct branches: first, the cultivation of grapes; and, second, the manufacture of wine—either of which can be carried on without the other.

The first branch is a horticultural business, and consists in planting and managing a vineyard. To follow this business properly and successfully, it requires capital, skill, and a scrupulous accuracy in every work. The absence of either of these three points must inevitably cause a failure. I suppose that any sensible man would declare as a humbug the idea that several hundred dollars could be made out of one acre of land annually, without having first spent a proportional sum of money and a corresponding amount of skilled labor on it. Most of the failures experienced in the business in Virginia were caused by starting it on a scale entirely out of proportion to capital and labor on hand, and I cannot caution enough against that mistake. Two acres of vineyard is by no means a small beginning for a man with limited capital, while ten acres is a sufficient start for any man with considerable means, in order to conduct it properly.

Skill is needed in cultivating grapes just as well as tobacco, or more or less in any business, and those who make up their minds to engage in a business without possessing the necessary skill, must, before anything else, relinquish their own opinion to that of men who are thoroughly acquainted with it. I think that in that way any sensible man would learn how to raise grapes just as well as I would learn how to raise tobacco after a few years' experience, and after having listened to the advice of skilled tobacco planters.

A scrupulous accuracy in all work in the vineyard is absolutely necessary; therefore, that work cannot be subordinated and dependent on farm work. Common farm hands in Virginia are accustomed to work in a most superficial way over large bodies of land,

and hate to be tantalized with working several days on one acre of land. They are, therefore, with very few exceptions, unfit for vineyard work.

The manufacture of wine is the great stumbling-block to the business—this being an art which requires great skill and experience, particularly in a country where the business is new. I advise to sell the grapes at a lower rate to a wine-manufacturing establishment, if possible, in preference to going to the very heavy expense of making wine and running the risk of losing the whole crop for want of skill.

The great complaint of the grape-growers of Virginia is the want of a sure market for wine, this being an article which cannot be sent to the commission merchant to sell like ordinary farm produce. We ought to look out for a market, and to occupy our minds with that subject before we plant a vineyard, as the kind of wine we will manufacture, and consequently the variety of grapes we have to plant, are dependent on the demands of the particular market we aim to supply. Not that variety of vines which is considered a heavy bearer, nor that which suits best our own taste and fancy, is the variety which we ought to cultivate, but that from which a wine can be made that will satisfy the taste of the consumers we wish to please. The neglect of that regard has already more than anything else brought the Virginia wines into bad repute, and the prejudice worked by that fact is not the smallest obstacle in our way.

The larger number of grape-growers in Virginia are Germans, who persistently aim to manufacture wines similar to those made in Germany, in which endeavor they are certainly on the wrong track. German wines hardly ever suit the taste of any other people but the Germans. You ask an Englishman, a Frenchman, or an American, and you will hear nine times out of ten that the German wines are sour. We never can expect to export wine to Germany, nor to supply the German market in the United States, owing to the impossibility of competing with the cheap wines imported from Germany.

Our efforts ought first to be directed towards building up a home market by manufacturing a wine which will satisfy the taste of the American consumers, which can be done without the use of sugar, or otherwise adulterating the juice of the grape.

The best market for wine is England, where a very large quantity is consumed and none produced. The market in England has not been sufficiently supplied for many years with those kinds of wines which are most relished by Englishmen, owing to the grape disease, which has ruined the vineyards of Spain, Portugal, and a considerable portion of southern France, whence the English market has been supplied for centuries.

The northern part of the United States cannot furnish a wine with body enough to satisfy the English taste, but we may be able to do that some day in Virginia, with our warm and dry climate, and with our varieties of grapes, natives of the South, which do not mature in the Northern States. To export wine to England should be our problem and the height of our ambition.

It is not an easy matter to realize that problem, and it can only be done by men of means in connection with men who are thoroughly conversant with the business. But men who never saw a vineyard, nor entered a wine cellar in their lives, and who do not know what wine is, cannot do it, nor anything else to promote the interest of the business.

Nelson county, Va.,

LOUIS OTT.

[NOTE BY THE EDITOR.—We copy this article from the Charlottesville *Chronicle*, and commend the excellent good sense it displays. Mr. Ott has been lodged in our midst for several years, and may claim a prescriptive right to speak in such matters, inasmuch as the Superintendency of the Royal Vineyards and Wine Cellars in the kingdom of Bavaria has been for many generations in his immediate family.]

The building up of a wine interest in Virginia must of necessity be a thing of slow growth. We know of no business requiring more available capital—at least to the extent of founding it on a basis involving any promise of adequate returns. No local demand is sufficient to make such a business profitable. It is, indeed, of all callings the most universal in its range. How, then, is it to be prosecuted? By each grape-grower making his own wine? Such a course is not less absurd than for every farmer to have a mill on his place to turn his wheat into flour. The market would be flooded with brands, with the ability on the part of no one to do more than supply the most limited demand. We have, then, large merchant mills, like the “Gallego,” “Haxall,” and “Dunlop,” which take all the wheat that is offered them, whether the crops be large or small, and having established their brands, are able to meet *any demand*. The manufacture of wine must be conducted in exactly the same way; in other words, it must be a business separate and distinct from that of grape-growing. Considering, therefore, the absolutely essential elements of the problem, it is not at all surprising that the isolated efforts to grow grapes and produce wine by the same individual, undertaken by too many in this State since the war, have resulted in failure and disappointment. It is not for one moment assumed, speaking generally, that one establishment may not, with success, both grow grapes and make wine; for we know that this is done both North and West: but in Virginia and North Carolina, as they now are and will for some time be, there is no reasonable prospect that capital enough could be commanded to conduct both, on an adequate scale, by the same establishment—especially when we consider how desirable it is to have them at a number of points, so as to present the grades in quality which differences in location only would produce. The wine interest of Europe is the growth of many centuries, and if we reach success we must “make haste slowly.” There is no investment so remunerative—to Americans especially—as *patience*. Certainly no enterprise of real value can be placed on a footing of considerable ultimate profit without the exercise of a good deal of it. They all have their seasons of tribulation—many of them very long ones—and not a few fail at the very turning-point to the road to success, because of the lack of patience to wait longer.

How do we stand in the ability to produce wine such as will command a permanent market? Virginia and North Carolina occupy, geographically, a central position, and have a genial and dry climate, not subject, in general, to extreme variations in temperature. The Piedmont region, in particular, in both States

affords soils and slopes peculiarly suited to grape culture, judging from the locations of most profitable culture in Europe. The quality of the bunch grapes brought to our city markets from that region shows what has already been done, and more—what is possible. Assuming, then, the natural conditions to be favorable, and that they justify the investment of money to make them available, what comes next? The formation of companies at eligible points—that is, where the factory and cellars will be accessible, in the way of transportation, to the grape-growers, and also to the world at large for the distribution of the wine, when ready for market. These companies should be made up of capitalists, and contain as few stockholders as the law will permit, and their interests put into the hands of a "live man." In general, close corporations only succeed, as "what is everybody's business is nobody's business." At first view, it would appear that the grape-growers themselves should constitute the members of the company making the wine, that they might enjoy all the profit ultimately growing out of the enterprise; but, in practice, it is believed that the possession of the ready money resulting from the sale of the grapes each year would prove more acceptable than any prospective benefit whatever. *The wine must be made by people who can afford to wait.* This delay involves cost of buildings, including cellars, presses, casks, and other appliances for making and keeping the wine, holding it for at least two years before it is ready for market; and when ready, of advertising, and gratuitous distribution *ad libitum*. The employment of men skilled in grape culture comes in, of course. All this takes money, as we have before stated, and a great deal of it. Nothing like any considerable demand for the wine should be looked for under five years; but once accepted by the public, *it will hold its own*, when the reward will come with a rapidity that will be surprising. Of course there will be the additional income derived from the brandy and vinegar, made mainly from the refuse.

We do hope that time will develop the ability in our State, as well as in North Carolina, to embark in the business of wine-making on a proper scale, and that it will demand the services of numbers of men fitted, as Mr. Ott is, by skill and experience, to make it a perfect success.]

[For the Southern Planter and Farmer.]

AGRICULTURAL COLLEGES.

No subject can be of more consequence to the people of the present generation than the education of their sons. My object is to assist in drawing public attention, and especially the attention of the great industrial classes to the consideration of this question. It may be taken for granted that the monied classes will provide for their sons that sort of education they may fancy to have. The education of the poor man's son is the problem I propose to present for discussion. How shall we educate the sons of the farmers and mechanics here in Virginia? I have attempted to show that we can not do so by requiring of them to take up a large portion of the short time they can spend at school in drudgery work—a kind of employment with which most of them are already sufficiently familiar, and in which many of them are capable of teaching their would be preceptors, the professors of agriculture and mechanics. If any

man supposes that a boy sixteen years of age can in the course of two years (their average period at school) acquire a good education and at the same time learn a trade, so that at the end of that time he shall be graduated in science and set up as an expert in his trade, with that man I have no argument. What, then, is the use of schools, with work shops and model farms attached to them? To bring the question nearer home. To what purpose have the people of Virginia invested at their agricultural and mechanical college nearly forty thousand dollars in land and above fifty thousand in buildings complete and incomplete? This is an institution wherein the law requires to be taught those branches of knowledge related to agriculture and the mechanic arts. Many persons believe that to accomplish this purpose no workshops or model farms are necessary. Many men of learning, ability, experience, and whose opinions are not to be despised, have so thought. It will be unnecessary to take an excursion around the world to ascertain the result of experience elsewhere with these new educational appliances. Here in Virginia we are surrounded by peculiar conditions and must modify our institutions in accordance with our public need. The circumstances of German peasantry are very different from those of our people. Their educational wants are not ours. There is also a wide difference between us and the people of New England. There is no such people on the face of the earth as the yeomanry of Virginia. Poor old war-blasted Virginia is needy enough; but she is not yet so poor as to need to demand half-time drudgery of her sons to pay for the odds and ends of education, to be picked up in the remnant of their time, at a school chiefly endowed by Federal bounty. If that may be called bounty grudgingly doled out to this great and grand old Commonwealth by a government to which she has given more in material, brains and character than all it possesses besides. Anything which cheapens education to the young men of Virginia's greatest classes in these sad needful times, is worth maintaining by the State. Now at the Virginia Agricultural and Mechanical College the workshops and model farms may be made, as they have been made, efficient aids to large numbers of the bravest and truest young Virginians of limited means. I say bravest and truest because they are neither afraid nor ashamed to work every hour they can spare from study for the wages that shall help to pay for the education they are striving to obtain. I say further, there is a moral power in the example of these young men which cannot fail to produce results worth a thousand fold more to the State than the original cost of model farms and workshops, and the further and greater cost of their equipment and maintenance to be paid in the future. Now require the whole body of students to do daily drudgery on the farm, no time will be left them to work for wages. This great public example will be lost and nothing whatever will be gained. Again, this school is located in a remote community and the cost of living will be rapidly increased to such a point as to render the blessings of the institution too costly to be attainable by a great part of the people; and we shall see the hard

handed sons of farmers and mechanics supplanted here by the sons of monied men. But apply the proceeds of farm and workshop to the purpose of reducing the cost of living to the students. Give them quarters and mess-halls, and provisions at a price which covers the cost of production. The workshops ought soon to supply the necessary buildings and furniture. The farm can easily supply beef, mutton, pork, milk, butter, fruit, ice, vegetables and bread stuffs for five hundred students. The possibilities of this institution are unlimited. Undoubtedly some for selfish purposes, some too who ought not so to behave, are trying to present problems impossible of solution. To load down the school with dead weight it cannot carry appears to be the aim and hope of persons capable of mischief. But in spite of all, the time will come when the State will vote an annuity sufficient for all its wants, and throw its doors open to the sons of all Virginians. Nor will this diminish but rather increase the patronage and usefulness of our high schools and colleges, and that great technical school, the Virginia Military Institute, and our great University. In Virginia, there is a wide unoccupied place for the Agricultural and Mechanical College, and its work, if well and properly done, will greatly promote the well being of the great industrial masses. Hereafter I will endeavor to point out the *educational* value of workshops and model farms.

CIVIS.

[For the Southern Planter and Farmer.]

LOCAL CIRCULATING MEDIUM TO AID THE STATE AND PEOPLE IN THE DEARTH OF CURRENCY.

At the last session of the General Assembly the Governor recommended to the Legislature an issue of three millions of dollars in treasury notes, that might be used in supplying the deficiency of currency in the State. The want of circulating medium in Virginia, especially among the agricultural community, is embarrassing the finances of the State, paralyzing industry, diminishing production, and depriving us of all hope of prosperity as a people until the want be supplied. Outside of our own power to provide for it, no prospect of relief appears, the only terms on which the Government will furnish us currency over which, since the year 1866, it has assumed exclusive control, being on pledge of Government bonds which we cannot make.

The recommendation of the Governor, sustained as it was by reasons which could not fail to impress its importance on all, failed to receive that consideration at the hands of the Legislature which it merited. A bill, however, was introduced during the session in the Senate for the issue of three millions of dollars in revenue certificates, its object being to meet the Governor's recommendation. The bill was referred to its appropriate committee, but no final action was taken on it. A copy of the bill, with an important alteration, is appended below.

If there be not constitutional objection to the issue of the certificates as proposed by the bill, the expediency of the issue is too clear to be made a question; and the only one left in connection with the subject is, as to the feasibility of sustaining the market or circulating value of the certificates, if issued.

The certificates proposed by the bill are similar to certificates issued by Alabama and Mississippi, respectively, in the years 1867 and 1870, which were of the size and appearance of national bank notes, and made receivable for all dues to the State. In the case of Alabama, provision was made for a time for having currency exchanged for the certificates at par, and while this arrangement lasted the certificates circulated throughout the State at par with currency. In the absence of this provision for exchange of currency for the certificates, they were taken, both in Alabama and Mississippi, at a discount of some 15 to 20 per cent. as compared with currency. The cases of Alabama and Mississippi just referred to afford the only examples since the war of such an issue of certificates as is proposed by the bill.

The bill is framed on the assumption that the value of the certificates will be sustained at par with currency, if provision be made to have currency exchanged for the certificates when called for. To effect this, no more currency will be required than was required of specie to sustain the value of State bank notes before the war. Then one dollar in specie was considered a fair basis for the issue of five dollars in notes, and ordinarily it was found to be sufficient. Thus a circulation of three millions required six hundred thousand dollars as a basis; and this when there was much less demand for circulating medium than exists now. It is, hence, fair to infer that the issue of certificates as proposed can be sustained at par with currency by the State's devoting currency to the exchange for the certificates to the extent of one-fifth of the amount of certificates issued. This is in the power of the State, and whatever is in its power and can properly be done for the relief of the people the State should do. *A bill for the issue of revenue certificates receivable in payment of taxes and all dues to the State, and to authorize the Governor to provide for their being exchanged for United States currency at par.*

Sec. 1. Be it enacted by the General Assembly of Virginia, That the Governor and Secretary of the Commonwealth have prepared certificates, which shall be known as "Revenue Certificates," upon such paper and with such devices as to them may seem expedient, in sums or denominations not less than one nor larger than twenty dollars, to an extent not exceeding three millions of dollars, to be signed by the Governor and Secretary, save that certificates under the denomination of ten dollars may be signed for the Governor and Secretary, respectively, by any persons appointed and authorized by the Governor to do so, which appointments, with a *fac simile* of the signature of each appointee, shall be made matters of record in the office of the Secretary; and the Governor shall cause said certificates to be numbered and have them registered in the office of the

Secretary in a book to be kept for the purpose, and deliver the same so signed, numbered, and registered, to the Treasurer of the Commonwealth, who shall receive and receipt for and be charged with the same as revenue certificate assets. The said revenue certificates shall be in form substantially as follows:

\$10.

REVENUE CERTIFICATE

No. 1.

A.

OF THE STATE OF VIRGINIA.

This Certificate is receivable as TEN DOLLARS in payment of taxes and all dues to the State of Virginia.

Richmond, Va., Jan'y 1, 1875.

— — Secretary.

— — Governor.

and on the back of the said revenue certificates shall be printed that they are issued under this act.

Sec. 2. That the Treasurer of the Commonwealth be and he is hereby authorized, to the extent to which there is, or hereafter may be, deficiency of funds in the treasury, to cover the interest due on the debt of the State and the expenses of the State, to use the said revenue certificates at their par value to pay said expenses, and to purchase, with the advice and consent of the Governor, bonds of the State which have not matured—bonds thus purchased to be held and remain uncanceled while said certificates or any portion of them are outstanding, and to be used to sustain the value of said certificates at par with United States currency; and for the last-named purpose, the Governor is hereby authorized to sell or hypothecate, from time to time, any portion of said bonds that may be necessary to procure United States currency required for the exchange for said certificates as hereinafter provided. To the extent to which the revenue certificates are used in paying the expenses of the State, any funds in the treasury not otherwise appropriated may be applied to the exchange of United States currency for the revenue certificates.

Sec. 3. That the Governor be and he is hereby authorized to cause United States currency to be furnished to the holders of said certificates in exchange therefor at par: provided, that whenever the sum to be exchanged for or on behalf of any one person or firm, or corporation, in one day, shall exceed the sum of one hundred dollars, then the agent authorized to make such exchange shall receive thirty days' notice, in writing, of the exchange desired, which notice shall set forth the numbers, letters, and denominations of the revenue certificates to be exchanged. And the Governor is hereby authorized to employ such agent or agents as he may find necessary to aid him in carrying into effect the provisions of this act.

Sec. 4. That all debts and engagements entered into or contracted, having for consideration the revenue certificates, shall be valid in law and binding on the parties thereto.

Sec. 5. That such amount as shall be found necessary, out of any moneys in the treasury not otherwise appropriated, is hereby appropriated for the purpose of carrying this act into effect, and the same shall be paid on vouchers approved by the Governor.

Sec. 6. That this act shall be in force from its passage.

SAMUEL M. WILSON.

NOTE BY THE EDITOR.—This money question, we confess, is a very hard business to understand, and we feel, in consequence, reluctant to do more than let the communication of our correspondent (who was president of a large banking institution in Virginia prior to the war) go before our readers on its own merits. We have never had any dearth of financial sparring in this country, and at the present time the “hards” and the “softs” appear to have carried it to the dignity of a real fight. In reference to the matter of “Revenue Certificates” in particular, and a circulating medium in general, it occurs to us that when a man has anything to sell, and a demand exists, he will get the money for it; and if he gets the money he will have it to spend. In few words, he gets all the circulating medium he is entitled to; and if he doesn’t *produce values* that will command it, he can’t get it, whether it be issued by the State or by the United States. So the question would seem to be not so much one of a medium of exchange as of something on which to base this exchange. This is especially the case with respect to the agricultural community, inasmuch as the “custom of trade” is to put the absolute cash into their hands the moment their produce is sold and the “account sales” made out. Other men may part with their goods on credit, but the farmer never, if he sells in open market. We are not aware furthermore that he has ever been prevented from receiving his money through any scarcity in the circulating medium.

These “Revenue Certificates” are, to our mind, only “tax coupons” in another shape, and these coupons do not pass as currency. Why? Because they subserve but one end, namely, payment of the public dues, which is, at best, only a very limited function. Something acceptable *as money* must be backed by at least a seeming responsibility. A State with credit as poor as ours, and with a wretchedness of financial management almost without a parallel, is not in a situation to inspire *par confidence* in any of her issues, no matter how fair the promises. Credit is traditional; it is no credit if it requires proof. We may like our friend well enough, but when we come to a cold money transaction with him we say, “Business is business, old boy,” and he *must* “come to the scratch,” or go away empty. The truth is, these certificates would probably find their lodgment in brokers’ offices, and merely swell the already full market in tax-paying material. We expect the sooner we get done “tinkering” the better it will be for all of us.

It is quite unnecessary to inquire into the causes which brought about our present condition. That is a threadbare theme, and we want to look at things as they are. We have considerable fixed capital (the land), and not much that is moveable. We would be glad to transfer some of this fixed capital, but we do not find people eager to arrange for it—first, because the Government has some to transfer on better terms than we could afford to take; and, second, because we are cursed by the presence of the negro. We have, however, this advantage: we are an old and reasonably settled community, if we have been badly battered, and not a little of the moveable capital of other people might have found a lodgment here, *through loans on mortgage*, but we did our best to prevent it by passing what is known as the Usury law (the title of the law should have been

"An act to authorize men to charge heavily for the risk of doing an illegal business"). Skilful business people, like the English, found long ago that the only way to accumulate money rapidly was to make every man's energies as free as the wind: and so money there is, like wheat or tobacco, or any other commodity, *worth all it will bring*. The old fine-spun theories, when communities were contracted in their operations, fade away before the fact of one's ability to place his money *by telegraph* at will *anywhere* throughout the world reached by a cable.

We are, then, simply in this fix: Having refused the only tangible aid we could hope for, we must take care of ourselves: and the only way we can do this is to produce, as best we can, something that will command money. Immigration, thus far, has been as crumbs of bread to a hungry man—relief so slow that no strength for present effort has resulted from it. The good Lord has not deserted us in our extremity, for the means He has vouchsafed us, used with only reasonable management, *will* give us ready money. If we had the space to spare, we could present quite a little history of examples that have come under our immediate notice. We will take one from our store: A man in one of the counties north of the James river had, when the war opened, an estate that would have brought readily \$25,000. He owed \$5,000. He went into the war, and lived through it. His negroes gone, his estate badly out of repair—all he had, indeed, proved to be insufficient to pay off the \$5,000 he owed. So, on consultation with his wife (true woman), he surrendered to his creditors the whole business. He bought (such conduct is everywhere a good basis of credit) 297 acres of land, on long credit, at \$3 per acre, or \$621. With his good wife and his two boys, one 12 and the other 14, he started life anew; and picking up a little year by year, last season sold his tobacco for \$2,000, and this year \$1,400. He had sustained his family in the meantime, and reported ample supplies on hand. What now is his case? *A goodly share of circulating medium and the education of his boys in the important lesson of learning the value of money.* We imagine the Commonwealth will never have occasion to be ashamed of those two boys.

We have, we fear, too much the disposition to "financier," and too little *to work*. If those thrifty people, the French, had set to crying over what they lost, the Germans would have been in a bad way to get their indemnity. They not only paid, like men, this debt—the most cruel and unjust ever put upon a people—but showed a determination to recruit their fortunes that has challenged the admiration of the civilized world. Germany to-day fears her more than she did before the war.

We have public as well as private burdens to bear, and they can both be managed by *patience, a hopeful spirit, and honest work*. We must expect no immunity from the burden imposed upon our father Adam, and there is nothing to show that he shrank from what it involved. As we have to sustain a public burden, it is due to us that it shall not be made a pound heavier than is necessary. If, therefore, it is believed that the State can get along with a session of the Legislature once in four years, it is our bounden duty to use all of our influence to bring it about. It is a legal maxim that "no man can plead ignorance of the law." That maxim was undoubtedly framed when laws were few and to the point. In these days of crude and voluminous legislation, if a man has to keep posted in this respect, he will have very little time left for anything else. The "Ten Commandments" were given for the government of a world till time should be no more, and yet they cover no more space than half a page of the

"Statutes at Large." If our civil and judicial machinery generally needs readjustment, so as to be put on a basis requiring less hands to tend it, it should be done. All this will save money and enable us the better to take care of our obligations. The better class of our citizens too much eschew their duty in a public way. They must suffer in consequence, of course—not only directly, but indirectly, by the impairment of the public credit. No man who calls himself a man will allow any one to tell him that he ought not to pay his honest debts. It is a matter of perfect indifference whether his debt is in an individual or a collective capacity. He is either a citizen or a slave. If a citizen, he is bound by the acts of his representatives, and can in nowise shift the responsibility. The man, therefore, who would, in cold blood, counsel the repudiation of any of our public obligations, will, we are persuaded, be found to be either a man who never enjoyed much credit, or one desiring to ride into place in default of ability to make a living otherwise.]

THE MISSISSIPPI METHOD OF SELF-DEPENDENCE.

"Hallo, stranger, you seem to be going to market?"

"Yes, sir, I am."

"What are you carrying that plow along for?"

"Going to send it to Pittsburg."

"To Pittsburg, in Pennsylvania?"

"You're mighty right; I am."

"What are you going to send it there for?"

"To get sharpened."

"All the way to Pittsburg to get sharpened?"

"You bet! We've starved our blacksmith out; he pulled up stakes the other day and went to Texas."

"Well, that's rather a novel idea, my friend—sending a plough so far to get it sharpened."

"Not so novel as you heerd it was. We do our milling at St. Louis."

"Is that so?"

"You're right it is. We used to have a mill on Punkinvine Creek, but the owner got too poor to keep it up, and so we turned to getting our grinding done at St. Louis."

"You don't mean to say you send your grist all the way to St. Louis by rail?"

"I didn't say nothing 'bout gris—we hain't got no gris to send. But we get our flour and meal from St. Louis."

"I see you have a hide on your wagon."

"Yes; our old cow died last week. March wind blowed the life out of her. Sendin' her hide to Boston to get it tanned."

"All the way to Boston? Is not that rather expensive, my friend? The freights will eat the hide up."

"That's a fact—cleaner than the buzzards did the old critter's carcass. But what's the use bein' taxed to build railroads 'thout you get the good of 'em? Used to have a tanyard over at Lickskill, and a shoemaker too. But they've kerflummuxed."

"Kerflummuxed—what's that?"

"It means, gone up the spout—and 'twixt you and me, that's mighty nigh the case with our State."

"When do you expect to get your leather?"

"Don't expect to get no leather at all—expect to get shoes, some day, made at Boston or thereabouts."

"Rather a misfortune to lose a milch cow, my friend."

"Not so much a misfortune as you heerd it was. Monstrous sight of trouble shuckin' and nubinnin' a cow, and milking her night and mornin', and gettin' only about three quarts a day."

"What are you going to do for milk?"

"Send North for it."

"Send North for milk?"

"Yes; concentrated milk and Goshen butter."

"Oh! I see the point."

"Mighty handy things, these railroads—make them Yankee fellers do all our jobs for us now—do our smithin', and grindin', and tannin', and milkin', and churnin'."

"I see you have a bale of cotton."

"Yes, we go our bottom nickel on cotton. Sending it up to Massachusetts to get it carded, spun and wove. Time'll come when we'll send it thar to be ginned, and then we'll be happy. Monstrous sight of trouble running these gins."

"That would be rather expensive, sending cotton in seed."

"No more so than them Western fellers pays when they send corn East and get a dollar a bushel and pay six bits freight. Besides, as I said, what the use of paying for railroads 'thout we use the roads?"

"You seem to appreciate the advantages of railroads."

"I think we ought—we pay enough for 'em."

"I reckon you fatten your own pork?"

"Well, you reckon wrong, stranger. I get them Illiny fellers to do that for me. Its mighty convenient, too—monstrous sight of trouble totin' a big basket of corn three times a day to hogs in a pen—especially when you haint got no hog to tote it to."

"I should think so."

"There's one thing lacking though to make the business complete."

"What's that?"

"They ought to send them hogs ready cooked. Cookin', and preparin' wood for cookin' takes up a heap of time that ort by rights to be employed in the cotton patch. I was sayin' to my old woman the other day, if we Mississippi folks got our cookin' and washin' done up North and sent by express, we'd be as happy as office-holders."

"Your horse in the lead there seems to be lame."

"Yes, needs shoein'. If he wasn't the only horse I've got, and I can't spare him, I'd send him up where they made the horse shoes and nails and get him shod. Can't get such a thing done in our parts. Perhaps I can at the depot."

"How do you manage to live in your parts, my old friend?"

"Why, we raise cotton. My road turns off here, stranger. Gee, Ball; back, Brandy. I am glad I seed you, stranger."

[NOTE BY THE EDITOR.—The above dialogue first appeared in the *Weekly Democrat*, of Natchez, Miss. We wish what it discloses had only a local application. When we consider that Baltimore pays *two-thirds*, as we learn, of the entire State tax of Maryland, we can understand how philanthropic Virginia really is, for she is Baltimore's main standby. We are glad to know that her own cities, and their industries, need no help, and that she is able to pay so fully the taxes of the farmers of Maryland. It shows "there is life in the old land yet," and that she has not ceased to be "the mother of States."]

[For the Southern Planter and Farmer.]

TUCKAHOE FARMERS' CLUB OF HENRICO COUNTY.

The club met to-day at the home of our president, Dr. Thomas Pollard, and I cannot resist the temptation to say that it is a most delightful home, and so because of the skill, industry, and indomitable energy of its owner. I venture the assertion, that if the *younger* and stronger class of Henrico farmers around the city of Richmond possessed one-half of the zeal and industry of Dr. Pollard, we should have thrift and blossoming homes, with prosperity and contentment, where now reigns sterility, idleness, and discontent. This is not so everywhere, I know; but how many there are who avoid the work and toil here evidenced, and who, instead of beautifying their homes and making them fruitful, find time but to complaint and every day "in town" politicating on street corners or, if no-idle at home, lounging about the courts? There is not *one hour's* spare time upon a farm; at least, such is my own experience. Urge then, Messrs. Editors, the importance of each and all so directing every energy. If our farmers would but stay more at home and join with heart in the hum of that unceasing industry that may be heard around all of our Northern cities, the land would smile, and prosperity and contentment yield its rewards. But I am straying involuntarily from my subject.

Dr. Pollard's farm is full of everything, and there is no room for more (it ought to be larger), from choice flowers, the Hamburger grape, to clover, lucerne, and the grain—all are there.

Of course we had a good dinner, plucked from the farm; and Mr. Cowardin, who decided not to accompany the "press gang" on their Northern trip, enlivened our table with his humor. And remembering his interesting paper (just published) and strict admonition for us to cling to grass, Dr. Perkins became refractory and uttered a philippic against the sowing of too much orchard grass—that it grew in tussocks, and without care was indifferent hay, expensive to seed, &c., &c., and that it is best to cultivate it in small lots and not in fields; that it was not an improver, and our clover should be sowed without it. To this doctrine your reporter entered his earnest protest; and this being our annual business meeting the subject was adjourned for discussion at our October meeting.

Mr. Vaughan also made an excellent, but partial, report on fall plowing; but this subject we were also compelled to continue to our next meeting.

Dr. Beattie stated that it has been mentioned, from authoritative sources, that the losses to our crops by the present wholesale killing of insectivorous birds will amount to \$1,000,000, and urged the importance of legislative protection to us. The Doctor will report a plan looking to this end at our next meeting.

As mentioned before, this was our annual business meeting; therefore, farm matters were little discussed. The following officers were elected: Dr. Thomas Pollard, President; Dr. J. G. Beattie, Vice-President; C. W. Robinson, Secretary; Dr. A. H. Perkins, Treasurer and Librarian; J. A. Lynham, Reporting Secretary.

Hurriedly yours,

"THE REPORTING SECRETARY."

[For the Southern Planter and Farmer.]

Your postal card of 10th instant is just to hand. In reply I have to say, that in these times that truly try men's souls as well as their skill to make the farm pay, we find very many writers trying to enlighten and instruct the farming community how to succeed with particular crops, and we are glad to find that very much good information is thus disseminated through your valuable pages. But our humble experience teaches us unmistakably that it is no one crop, nor two, or three, or all the crops that is to lead this once happy and healthy but now down-trodden and poverty-stricken farming community to success and permanent prosperity, which you in your monthly visits are so nobly trying to help, aid and assist. The secret of success is in a close, well planned application to business, backed by indomitable industry. Economy overruling and controlling all. Make your tobacco, wheat, corn, oats, peas, potatoes, fruits, and vegetables, and be sure they are all on really good soil by nature or made good by home manure, if you can procure enough, if not, use some good fertilizer. Work them all well and be sure that all are carefully husbanded in good order and nothing wasted. Then there is the grass crop and stock raising, not the least, but in our humble opinion the greatest and prettiest source of nett gain to the farmer; particularly so, if he will go to a little extra cost and raise none but improved stock, which is as easily raised as the common scrub stock, and when raised doubly valuable.

Well, what about poultry. My wife and I have deliberately concluded that hens and turkeys will not pay at Well Water Town, but ducks and geese will pay a handsome profit when well cared for; and with the same injunction nothing on the farm can pay better and give more pleasure than a few improved hives of bees.

Many farmers these times seem to think the farm will not pay. That is a great mistake. The fault is in the man and not in the farm. It is bound to pay if the farmer does his whole duty. A little farm, well tilled, with a wife well willed is a fortune to any man. If he does not handle as much money as some others, he has all it can purchase, all the comforts and necessities of life, and happiness which money sometimes cannot buy. We think any man who will pick his flint and keep his powder dry, and has practical common sense, and will make

honesty, industry and economy his watchword, can and will succeed on a farm. When our clubs have expired, notify us and we will try and renew.

F. N. MAXEY.

Well Water Va., Sept. 17th, 1875.

GRAIN PRODUCING COUNTRIES.

The three greatest grain-producing countries in the world are Russia, France, and the United States. According to the statistics of 1870, Russia produced 460,000,000 bushels of wheat; France, 286,000,000, and the United States the same. Russia exported one-eighth of her grain; the United States, one-fourth, and France, none. The United States, however, grows an enormous amount of corn, which the others do not. South Australia is another candidate for cereal honors, and this year announces that it has 200,000 tons of surplus wheat, 45,000 tons of which have already been exported, while the remainder is ready for shipment.

THE DOG TAX.

The dog tax yielded the State of Tennessee \$300,000 last year. This sum will be used in remunerating the owners of sheep for losses occasioned by dogs, and if the tax is continued four years there will not be ten sheep killed by dogs in the whole State any one year. We hope that our Legislature will impose a tax upon dogs at the coming session. The people demand it as a right, and protection is absolutely needed by those engaged in sheep-breeding, even if nine-tenths of the dogs are taxed out of existence. We repeat, that valuable dogs rarely, if ever, are sheep-killing dogs, and when a good dog is found among sheep-killing dogs, it has been led off by such curs into the commission of acts not natural to it; and beyond the tax (which any man who owns a valuable dog will willingly pay), the owners of such dogs will not suffer. We want protection for and improvement in all classes of animals, and a dog tax such as we have suggested will effect these objects, and be mutually beneficial to the owners of sheep and the owners of good dogs.

SHEEP ON THE FARM.

Sheep are undervalued by the mass of landowners as a means of keeping up the fertility of the soil and putting money into the pockets of the farmers. The moment one begins to talk of sheep husbandry the listener or reader begins to look for wool quotations, as if the wool was all that yields profit from sheep. One might as well look for wheat quotations alone when there is talk about the profits of farming. Sheep on a farm yield both wool and mutton. They multiply with great rapidity. They are the best of farm scavengers, "cleaning a field" as no other class of animals will. They give back to the farm more in proportion to what they take from it than any other animal, and distribute it better with a view to the future

fertility of the soil. Prove this? There is no need of proof to those who have kept sheep, and know their habits and profits they yield. To prove it to those who have not the experience, it is necessary they should try the experiment or accept the testimony of an experienced shepherd.—*N. Y. World*.

THE EUROPEAN CROPS.

The bulk of the English wheat harvest is gathered in good order. The new samples show great variety, but as a rule are below average excellence, and in some cases are very poor. The *Mark Lane Express*, in its weekly review, says:

"The crop is short as a whole, and large importations will be necessary. In Germany (so also in France) the harvesting has gone well: prices were easier, although for future delivery most are above the present rates. In Belgium prices have varied, but mostly downward. In Holland the movement has been decidedly downward. At St. Petersburg prices are lower. The harvest in the neighborhood of Dantzic has been completed under most favorable circumstances. The new product is of fine quality and good weight, although the total yield is below that of the preceding year."

It is estimated that between now and the end of August, 1876, the United Kingdom will be compelled to draw from abroad at least 10,000,000 bushels of wheat, and of this quantity it is assumed that the United States will furnish 60,000,000 bushels.

GUANO NOT AN EXCREMENT.

The long received opinion that guano is the deposit of myriads of sea birds, accumulating through long ages, is rendered untenable by the recent investigation of Dr. Habel. After treating the guano with an acid, microscopical and chemical examination revealed that the insoluble residue was composed of fossil sponges and other marine animals and plants precisely similar in construction to such as still exist in those seas. The fact that the anchors of ships in the neighborhood of the guano from the bottom of the ocean is quite in opposition to the prevalent belief. Dr. Habel, therefore, considers that the deposits of guano must be the result of the accumulation of fossil plants and animals whose organic matter has been transformed into nitrogenous substance, the mineral portion remaining intact.

"Madam," said a gentleman to his wife, "let me tell you, facts are very stubborn things." Quoth the lady; "what a fact you must be!"

At a court martial, a young Irish officer, when questioned whether he had not given the lie to a certain person, replied, "No; I only said that either he or the colonel had told a lie, and that I was sure it wasn't the colonel."

GROWING QUINCES FOR PROFIT.

Wherever quinces can be grown there is no fruit which offers greater or more certain remuneration to the grower. A well-cared for quince tree will bear some the third year from planting, and for many years will increase in productiveness and profit. The proper distance for planting is twelve feet apart each way. This will give 325 per acre. I have had trees bear one peck to one half bushel the fourth year after planting; but it is usually the fifth or sixth year before they produce much of a crop. Twenty years ago the price was 75 cents to \$1 per bushel; but of late it has steadily risen, and the demand is and will be good. No fruit is better for canning, and this will create a demand. Last year was a great fruit year; but quinces sold steadily from \$6 to \$8 per barrel in New York, and were often quoted \$7 to \$10. I have sold them many years for \$2 to \$2.50 per bushel.

A well-established quince orchard, in full bearing, will yield three pecks to a bushel per tree. On an acre there should be at least two hundred and twenty-five bushels, which, at \$2 per bushel, would bring \$450 per acre. The quince requires less care than most other fruits, but well repays all it receives, and would pay still better with more. Trained in tree form, with clean, straight trunk, the quinces will be much fairer, and the tree can be better guarded against attacks of the borer, which is its most serious enemy. Planting on moist, mucky, or even wet ground, I have found a partial protection from the borer. People who cannot grow quinces on dry or sandy uplands can safely blame the borer as the cause of their failure. Applications of carbolic soap will prevent the insect from laying its eggs.

With regard to the profit from quinces, at even \$2 per bushel, I may safely rate it at \$300 to \$400 per acre. An enterprising neighbor of mine, some years ago was boasting to me of the profit he made from strawberries at 10 cents per quart. As I was that year selling quinces at \$3 per bushel, I made a calculation, and found I was getting about as much per quart, lacking on 20 cents per bushel, as he received for strawberries. The quince trees needed less care than the berry patch, and cost far less to gather and market. He agreed with me, and next spring planted a quince orchard, which is now coming into bearing.

In many parts of the country quinces cannot be grown; but they are well worth a trial everywhere, and where they succeed, no crop is more profitable. There is now, and is likely to be, a large demand for young quince trees. Farmers who have orchards of the Orange or Rea's Mammoth, can make a good thing from them, aside from the fruit, by saving all the suckers that spring up around the trees, either for sale, or to extend their own quince orchards.—W. J. F., in *Country Gentleman*.

A whimsical comparison being made between a clock and a woman, Charles Fox observed that he thought the simile bad; "for," said he, "a clock serves to point out the hours, and a woman to make us forget them."

OFFICERS OF THE STATE GRANGE.

Master—J. W. White, Eureka Mills, Va.
Overseer—T. T. Tredway, Prince Edward, Va.
Lecturer—J. W. Morton, Eureka Mills, Va.
Steward—Wm. McComb, Gordonsville, Va.
Asst. Steward—I. B. Dunn, Washington co., Va.
Chaplain—J. C. Blackwell, Buckingham, Va.
Treasurer—W. B. Westbrook, Petersburg, Va.
Secretary—M. W. Hazlewood, Richmond, Va.
Gatekeeper—M. B. Hancock, Charlotte, Va.

EXECUTIVE COMMITTEE.

A. B. Lightner, of Augusta.
 R. V. Gaines, of Charlotte.
 A. M. Moore, of Clarke.
 R. L. Ragland, of Halifax.

ADDRESS OF MAJOR R. V. GAINES AT THE GRANGE FESTIVAL AT SOUTH BOSTON, VIRGINIA, AUGUST 31st, 1875.

Want of space forbids our presenting to our readers more than an extract of the eloquent address of Major Gaines on the above occasion.

After a lengthy review of the necessities which induced the organization of the Patrons of Husbandry, and a minute description of the various divisions of the Order and their respective duties and jurisdictions, he says: "I would impress upon you that one prime object of the Order of Patrons is to increase the quantity and improve the quality of all the products of agriculture and at the same time diminish the cost of production and reduce the expense of distribution; in carrying out this humane and laudable object it must be borne in mind that there are two other producing classes, namely, miners and manufacturers, and that these three create all the wealth and produce, all the commodities known to trade and commerce.

* * * * *

"It is the object of our Order and other kindred organizations of producers, to conduct the exchange of our products upon the basis dictated by our mutual and harmonious interest, so as to insure to each a just return for the labor and capital invested, thereby securing the greatest good to the greatest number."

TO SECRETARIES.

Secretaries of new Granges will please examine their dispensations. If dated since June 30, they will not report until December 31st, when they will report all changes in membership from date of organization, and will pay the initiation fees for each member received, but will only pay quarterly dues for the quarter ending December 31st. Quarterly dues are paid for all reported under the head of

"total number of members to date." The old quarterly blanks furnished by the Secretary of the National Grange are of no service to the State Secretary. Please use the blanks furnished from this office. Secretaries who have failed to receive them are requested to notify me by postal card. No. 622 is the last Grange organized which is required to report for the quarter ending September 30. Attention is called to the following law of the National Grange:

ARTICLE VII—SECTION 2.

Constitution Patrons of Husbandry.

The Secretary of each Subordinate Grange shall report quarterly to the Secretary of the State Grange, the names of all persons initiated during the quarter, and pay to the Secretary of the State Grange, one dollar for each man and fifty cents for each woman initiated during the quarter; also a quarterly due of six (6) cents of each member.

Treasurers are not required to report under the new law.

M. W. HAZLEWOOD, Sec'y V. S. G.

PATRONS DO NOT GO TO LAW.

The Pacific Rural Press says: "Farmers have long been aware of the folly, and worse than folly of going to law; but the lack of business and social intercourse with their neighbors often prevents a proper understanding of right and mutual interest, encourages suspicion and jealousy, and too often leads them to rush into the courts, and sometimes driving the whole neighborhood into active partisans. But thanks to the influence of the Order of Patrons of Husbandry, this disturbing element in farm life throughout the country generally is disappearing. The Order has brought farmers into closer communication with each other, has developed mutual confidence and respect; and without the assistance of any secret charm has produced a change which is now substituting arbitration for law. Arbitration is one of the grand principles of the Order, and is already producing important material results, as well as promoting peace and harmony in many neighborhoods.

A NATIONAL GRANGE OFFICIAL PAPER.

The Committee on Co-operation, in their revised report to the National Grange, propose to turn the Executive Committee of the National Grange into a publishing committee, for the purpose of publishing a Grange newspaper, which shall serve as a means of communication between the officers and private members of the Order, furnish reports of crops and stocks, of foreign and domestic markets, instruct members on farm, garden and household matters, and set forth the views and aims of the Order, so that those who have business dealings with it may rightly understand it, and not be misled by misrepresentations concerning the Order and its objects.

Concerning the general spirit in which the proposed organ is to

be conducted, the committee says: "Let it be a medium that makes no war, save against vice and immorality and corruption. One filled with the spirit of fraternity and co-operation with every other interest that has for its purpose the development of the virtue and the material interests of our common country, and the good of the industrial interests in general. Strictly forbidding all things partisan and all unkind personalities, but admitting free discussion conducted upon that high toned respect for an opponent's views that acknowledges an honest difference of opinion to be no crime."

THE LECTURER.

The Lecturer is generally esteemed the *brains* in our Order. At any rate he who is elected to fill such a high position should be competent to edify his Grange on topics of interest to its membership. He should at each stated meeting read an essay or deliver a lecture. He should fix a programme of instruction, having agriculture, literature and other subjects of importance as the basis of his interesting work. It is with him to make a drag of each session or a success of it.

Let him deal with essential, practical facts in relation to farming, and have the members follow, relating their experiences, methods, and the results of their labor. This habit of timely interchange of views will develop a high order of membership, give life to the social elements, obliterate indifferences, give breadth and depth to the views of individual members, and prepare them to appreciate fully the blessings inherent in his noble brotherhood. No other movement has ever be inaugurated so capable as that of the Patrons to dignify agricultural labor. And to no officer in the whole staff of Grange officers is entrusted to a greater extent the intellectual improvement and general success of the Order than the Worthy Lecturer.—*Ohio Farmer*.

THE GRANGE is becoming a great moral educator. In it farmers are coming nearer together, and are learning that they have a unity of interests, and that their interests are not to be promoted by pulling each other down, but by organization and co operation.

The people are beginning to understand that we do not regard what we save in purchases as our greatest good, but rather as the smallest of the benefits of our Order. That we are not making war on any honorable or useful employment, but that we are systematically endeavoring to take care of our own interests, and advance to a broader and higher intelligence, and that we care more for honesty, fair dealing, and sterling worth, than we do for party or clique.—*Cor. Ohio Farmer*.

WHY YOU SHOULD BE A PATRON.

Because farmers, as intelligent men, should meet together and discuss subjects pertaining to their advancement, intellectual, agricul-

tural and financial. Because they, by meeting and discussing subjects pertaining to their welfare, elevate and educate themselves, and thus advance the welfare of the community.

Because neighbors meet together and thus form a social order heretofore unknown among farmers. Because by concentration and combination they can secure greatly reduced rates.

These are only a few of the principal reasons why farmers should be patrons. From time to time we shall revert to these subjects in detail, and hope to be able to prove that no farmer can afford to be outside of the Order.

To the Subordinate Granges of Patrons of Husbandry of Northern Virginia:

CULPEPER, VA., Sept. 6, 1875.

WORTHY BROTHERS—The District Grange of Northern Virginia at its last meeting in Alexandria adjourned to meet at Culpeper on the 14th of October. All Patrons within the district, whether connected with the District Grange or not, are respectfully invited and requested to attend the approaching meeting. The Piedmont Agricultural Society will hold its Annual Fair at Culpeper on the 12th and 16th of October, and extends a cordial invitation to the Patrons of Northern Virginia to visit the Fair on the 14th in a body and in full regalia. They will be welcomed to the grounds by the President's Aid, Hon. B. Johnson Barbour, and after a grand procession will be addressed by the Worthy Master of the State Grange, Col. J. W. White.

Subordinate Granges that have not provided themselves with regalia are earnestly requested to do so with the least possible delay.

We hope to witness an imposing display of the Fraternity and expect to furnish an occasion full of interest and instruction to them and of general benefit to the Order.

Very respectfully, fraternally yours,

S. S. BRADFORD,

Master District Grange N. Va.

THE GRANGERS AND THE LAWYERS.

If the grangers had done nothing more than develop mutual confidence and respect, which has, in many instances, (when parties were embroiled in litigation,) substituted friendly arbitration for expensive law suits, it has done a good work.

Under the friendly influences of the Order, where whole neighborhoods were driven into active and malignant enmity, and where court-houses were filled with clients, and the grasping lawyer, (never satisfied unless he gets all) keeping alive the fierce fires of hatred to one another, by his legal advice, these discordant elements are rapidly disappearing.

In promoting peace, harmony, good will and friendship, arbitra-

tion has wrought important material results. The Grange hall holds judge, lawyer, client, sheriff and witnesses—and all without publicity, and all without cost. Who wouldn't be a Granger.—*N. C. Agricultural Journal*.

MORALLY. Grange teachings are unsurpassed by any other organization, and none but honorable, honest, moral men and women should be admitted within the grange room: we are here taught to be upright in our dealings with all men: to be kind and affectionate in our homes; and charitable in everything. It elevates the tastes and advises a careful attention to Flora's beautiful offerings. It fights against weeds of all kinds, whether they be tares that infest our field crops, or those that grow up in the pathway of our lives. The Grange when in working order is one of the most beautiful organizations in existence.—*The Granger*.

[For the Southern Planter and Farmer.]

SOME THOUGHTS FOR FARMERS.

We Americans go into ecstasies over our "glorious Constitution." It is a grand piece of workmanship. Let us assume for it, (more than can be claimed for anything human) that it is perfect—will it of itself preserve our rights?

We are satisfied to vote whenever the election time comes, and however this or that party may dictate, without an independent idea of our own. That Constitution recognizes no such voting machines. It is based upon the idea of a high, independent manhood, that is jealous of its rights; and that dares to resist encroachments upon liberty, whether made by king, or capital, or corporations, or monopolies. And this *thinking* manhood must be possessed by the great industrial classes that build up and preserve nations. For it may be laid down as one of the truths taught by all history, that when the industrial classes shape the policy of a nation it is prosperous and happy; when they resign this high prerogative to other hands, the nation retrogrades. And naturally so, too, because a nation that fosters the industries cannot be otherwise than in a thrifty condition. But when they languish, then national decay ensues. Then it is a duty that every farmer, every mechanic, every manufacturer, every miner, owes to his country, to himself, to posterity, now and then to take a calm, dispassionate view of the condition of the country. If this or that branch of industry is languishing, let him search out the cause and the remedy therefor, and try to impress his views upon his fellow-citizens, and write for the industrial press about it. If the reader will go with me a little I will explain my meaning. Let us look at agriculture. Nine farms in ten in the United States are going down—and one-fourth of the farmers have abandoned their calling within the last ten years. How is it with manufactures? A large number of establishments have sus-

pended or are running on limited time and curtailing their operatives' wages; while these in turn are striking for higher wages.

The trading class seems to be losing its moorings and drifting away to sea—failures to the amount of \$75,000,000 reported for last few months. Domestic commerce droops, and foreign trade is against us to the tune of \$50,000,000, and this must be paid in specie. We are importing English railroad iron to run tracks over our iron mines. American shipping is giving up the contest for the carrying trade of the world. The stream of emigration is beginning to flow back to the old world. But don't suppose everybody is getting worse. Out of the 40,000,000 (in round numbers) in the United States, 3 per cent., or something over 1,000,000, have absorbed two-thirds of the wealth of the nation, leaving the remaining third to the other 39,000,000. And this is growing worse—or as Mr. David A. Wells, the Special Commissioner of the Revenue, says: "the poor are growing poorer, and the rich richer." This is a gloomy picture for a young, vigorous nation like ours, and tells a sad tale for American statesmanship. But the industrial classes are waking up; the destinies of the country are with them. They are beginning to realize it, too, in different parts of the country. In her last election Illinois cast 80,000 votes in behalf of the industrial interests; Indiana 20,000. Last year the industrial movement in the West aspired to assume a national character at Cleveland—and another national industrial convention met at Harrisburg; and last November the Farmers' Council of Virginia and North Carolina, at Petersburg, appointed a committee to move in the matter. And last, as a kind of combination of all these movements into one, a National Council of the industrial classes met at Cincinnati, in Ohio, on the 7th Sept., 1875. It met for business and after some days' deliberation adopted a short, pithy platform, embraced under the following items:

1. Free trade and direct taxation.
2. Treasury notes for currency.
3. Demand for the repeal of the National Banking Laws and the resumption act of 1875.
4. One term for President of the United States.
5. Subjection of all corporations to law.

The great West and the South voted a unit on these propositions, and it is remarkable that there were but few dissenting voices even from the East.

Farmers, think on these things. Let us study theoretical and practical farming in all its branches.

But we should remember that we are citizens as well as farmers, and as such, duties outside of the farm demand our attention. We may exhaust our minds and wear out our bodies on our farms, but unless good laws obtain, others will reap the rewards of our labors. Farmers, let me put one question to you. You work harder, live more economically than any other class—now how much money do you clear? Don't think it the fault of your lands, or of the sea-

sons, or of the peculiar products of your section—the great fault is with the laws—State and national—but particularly national.

It requires the labor of five millions of men to pay the yearly expenses of the national Government. It is contrary to the nature of things for these things to continue without at sometime producing anarchy, blood-shed and revolution. Our wisdom is to prevent it.

JOHN R. WINSTON.

Editorial Department.

OUR STATE FAIR.

It is needless for us to dwell upon the duty of our people in this matter. If any one feels gloomy, let him come—it will do him good. Cheerfulness we should have, if it is necessary to fight for it. The very exercise will make us better men. A State cannot be built up from ruins in a day. Let any man look at *what has been done*, and he will feel proud to find that few, no matter how much favored, have beaten us in solid results. We have, in fact, every thing to make us thankful.

We hope that the ladies throughout the State will not be backward to send to the Fair samples of their handiwork: and when they are interested *the men are bound to be*. LET AS MANY OF THE BOYS AS POSSIBLE COME. They are soon to be the custodians of the Commonwealth, and the dear old Mother looks to her sons, not only for defense, but that her dignity shall be maintained. Let them see what can be accomplished, and realize the bounties of a Providence that has fixed their lot in such "pleasant places."

HAVE WE NOT A RIGHT TO FEEL ENCOURAGED?

We think the farmers of Virginia have reason to congratulate themselves upon the success of the year, the crops of which are now being harvested and secured. Never since the war has Virginia been in so good a condition materially, and never have her people exhibited such indomitable pluck and determination to succeed as they are now exhibiting. They are waking up from the lethargy which seems to have bowed them down for the last decade, and are beginning to realize the fact that soil, climate and geographical position, all considered, Virginia is the best State in the whole Union for general farming purposes. We are glad, too, to see a healthy reaction taking place in the views of farmer's sons in reference to the business they are to pursue. Ever since the war there has been a perfect mania among the young men of the country to rush to the cities and engage in the general business of trade, or devote themselves to the practice of a profession. This exodus of almost all the more intelligent young men from the country was not owing so much to a disposition to avoid labor of any kind, but simply to avoid farm labor, which, for some reason or other, even those engaged in it from necessity, seemed to think degrading. It is useless for us to attempt here to show that such an opinion was without the shadow of foundation in fact; all men of intelligence, if they will only give but a moment's thought to the matter, will see at once that farming intelligently pursued is the first and highest calling in which man can engage. Success in farming and among farmers is the foundation of success in every department of trade. No country whose agricul-

tural interests languish, can long remain in an otherwise prosperous condition. Nor is the too prevalent idea that anybody who has the requisite muscle can farm successfully any nearer correct. Upon the contrary, there is no profession or calling in life which requires a greater variety of knowledge, or a more correct and well-balanced mind, than farming if carried to its highest perfection. But we are confident that the farmers of Virginia do not realize all the advantages they possess. With a somewhat extensive experience in farming in other sections, really superior farming countries, and an observation extending through twenty years of active life, in a dozen different States, we do not hesitate to say that were we entirely unfettered with large or small capital, as the case might be, we would unhesitatingly select Virginia as the best place in the whole Union in which to begin life as a farmer.

The soil of the State responds more readily to any effort at improvement than any we have ever seen. The climate is mild and healthful, rarely going to either extreme; the lands are exceedingly cheap and adapted to the production of a great variety of crops, and then, when the crops are grown, we have the markets of the world at our very doors without any possible chance for railroad combinations to make the freighting of our produce a burden. Already the district around Norfolk furnishes immense quantities of fruit and truck to the northern markets and all over the country. In Albemarle, in Bedford, Campbell and along the slopes of the valley of the James, vineyards and orchards are springing up. Within the next ten years capital must pour in here for investment. Wine manufacturing establishments will be built up in the districts where grapes are abundant. Canning establishments will be at the great centres to take the surplus fruits and vegetables and preserve them for future use. Manufactories of various kinds will utilize our immense water powers and the operative population creating a new demand for meats and vegetables, will give impetus to products never felt before, and which cannot but bring prosperity to the whole State. All we want is a little time, a little more capital, and a thorough determination to avail ourselves of the almost inestimable advantages which nature has put at our disposal. A few words to outsiders, if this should fall into the hands of any who are seeking homes. We wish to tell them, if they are honest, industrious and frugal, we want them to come and see Virginia as she is, and weigh all her advantages before going elsewhere. We have a more genial climate, a greater variety of products, and the same labor, capital and skill will yield a larger net income than in any of the most favored of the Western States.

NOTES FOR THE MONTH.

This is the eighth month in the Roman calendar (Octo. eight). It is an important month to the farmer, both for sowing and gathering. It is the great month for

WHEAT SEEDING.

Some judicious farmer has observed that if he could, he would sow all his wheat on the 10th October, it not being desirable to sow earlier on account of the "fly," and not later on account of the fear of "winter killing." We will suppose the land has all been fallowed, unless it is the corn land, and indeed it is not too early to have cut down the corn and stacked it, or hauled it off, and to have ploughed the land ready for seeding. But we think all corn land should be seeded to "winter oats," as we shall presently explain. Well, the land has been fallowed. Now it must be thoroughly dragged to get it in fine tilth, and to kill

all the grass which has, by this time, been freely sprouting. We advise $1\frac{1}{2}$ bushels of wheat to the acre. This is a medium quantity, and if sowed the last of this month, or in November, we should sow at least two bushels. Some American farmers sow from 2 to $2\frac{1}{2}$ bushels, while many of the English farmers advise from one peck to one-half bushel. The celebrated Mechi, of razor strop fame, now a skilled British agriculturist, is an advocate of thin seeding. In England, there is no danger from winter killing, and the wheat is growing in this climate, more or less, all winter, and, the land being strong, there is always much opportunity for tillering and branching. The late Mr. Hill Carter, who had seen and examined English cultivation, said that the thin seeding which was so successful in England would not do for this country. He advised not less than two bushels per acre. The "Falta" wheat still maintains its popularity, and has yielded very well the present season. Whatever kind is selected, take care that the seed is pure, and free from filth of all kinds. It is folly to sow indifferent seed. It is equally unwise to sow wheat on poor land without fertilizers, land insufficiently drained, or on land which has not been limed, or has not, naturally, lime in the soil. After seeding, water furrows must be run wherever needed, and the plow will not always suffice. Follow with shovels, and open thoroughly, and leave not one spot of water rest on the land. Rutt's drain plow is a very valuable implement for opening surface drains.

WINTER OATS.

It is not too late to sow winter oats. They yield well, gotten in by the 15th or 20th October, though not so well as if put in earlier. One and a half bushels should be used to the acre if seeded from 15th this month to the 1st November, for they have not the same time to tiller, and are more liable to be winter killed. Try to get clean seed, for the winter oat is proverbially filthy, and will foul the land unless pains be taken to get good, clean seed. All corn land had better be put in winter oats. Either sow between the corn, by first running a long tooth cultivator, or plow, if there is much grass, then sowing and covering with cultivator—the hoe hands following, and chopping in the row of the corn. Or cut the corn down, or remove it, plow, drag, sow, and redrag. There is too much grass in most corn fields, the present season, for the first plow. As we have before said, we think winter oats to be a more certain crop than wheat, and more profitable for the farmers generally to raise. They will yield, one season with another, much more than wheat on medium land and more too on good land. They should be baled for market.

GATHERING CROPS.

This is the month for housing many things. Corn may be gathered, and if not well dried should be put in pens made with rails and carefully covered over. Fodder should be housed or stacked. Potatoes, Irish and sweet, should be dug and carefully put away. Some prefer to put them in a mound out doors, though sweet potatoes are safer in properly prepared cellars. Our Hanover friends dig them in dry weather, put them in cellars made in outhouses, some putting them in top fodder stacks: covering them carefully with "pine tags," and these with close fitting boards to keep out the air. They should not be put in warm places, and should be moved as little as possible from place to place, after they are dug. Pumpkins should be put in the fodder stacks, or cool cellars.

HOGS

Must be put up now and freely fed, that they may put on fat before the cold weather.

DITCHES

May profitably be dug in the dry weather of this month, and old ones cleaned out.

FALLOWING.

If wheat and oats are put in, and crops secured, the plough should be kept running in fallowing for corn, particularly if there is much cover on the land.

We have received the catalogues and premium lists of the following Fairs:

Baldwin Augusta Fair to be held at Staunton commencing on the 12th of October. A. M. Bowman, one of the most spirited and enthusiastic stock-growers in the State, is President of this Society. He is comparatively a young man, but is enthusiastic in his business, and eminently qualified for the position he fills.

The Piedmont Agricultural Society, which meets at Culpeper on the same day, has the veteran stock raiser and agriculturist, Col. S. S. Bradford, for President. It is useless to say more of him as he is generally and favorably known all over the State. We are assured that the prospect is fine for a first-class exhibition and that the Society is in a healthy condition.

The next in order is the Petersburg Fair which opens on the 19th of October. General Mahone is President of this Society, and as he is sure to make a success of every thing he undertakes, from the storming of a battery to the running of a railroad, we may very fairly presume that he will not fail in his new position.

The last in the list is the Virginia State Fair, which, under the auspices of Col. Knight as President, Mr. E. G. Leigh, Secretary, and Col. Carrington, Chief Marshal, promises to give us the most completely successful exhibition, commencing on the 25th October, we have had since the war.

The Societies of the State were never better officered. We propose to give our readers in future numbers of our Journal, the pictures and a short sketch of the above Presidents of our Agricultural Societies as *representatives* of the agricultural interest of the State. President Knight will appear in our next issue.

THE RURAL MESSENGER announces the retirement of Mr. B. W. Jones as editor of that paper in consequence of ill health. Mr. Jones had justly won the esteem of his readers by the ability, dignity and courtesy which characterized all he wrote. We wish for him a speedy recovery to health. Mr. Thomas Laurence succeeds him. We congratulate the MESSENGER on securing a gentleman so well fitted for this position by his varied learning and extensive knowledge of both the practice and literature of agriculture. Mr. L. will wield a ready and forcible pen. We commend the MESSENGER to our readers as worthy of their support. Price \$2 per annum.

We have received from John Saul, Washington, D. C., a very complete catalogue of his Fall Stock of Nursing Trees, Roses, Grape Vines and Ornamentals, including choice Evergreens and Flowering Shrubs.

Mr. Saul is an old and reliable Nurseryman, and his catalogue shows that he has availed himself of his age and experience to collect a stock which cannot be excelled, if indeed it can be equalled, south of New York. His prices, too, are exceedingly low, and if any one desires to have any plants of the infinite varieties he offers, they can certainly get the money to buy at his rates. His stock of grape vines is very large and fine, and are offered lower than we have ever known them.

MAJ. WILLIAM T. SUTHERLIN.

This gentleman, whose likeness forms the frontispiece of this number, may be regarded as one of the most enterprising and successful farmers in Virginia at this time. was born in Pittsylvania county, near the city of Danville, Va., in 1822, and has been a citizen of Danville since the year 1844. His early advantages of education were such as were afforded by our common schools of that day, with the addition of three sessions at the Danville Male Academy, and one session at a similar institution in the county of Franklin, Va. His studies were confined to such branches of English education as were best calculated to fit him for the active duties of business life, for which he manifested an early preference, as well as a remarkable degree of native talent. After completing his course of studies and spending a few years upon the plantation of his father, where he learned many valuable lessons of industry, economy and sobriety, which he has never forgotten, in the year 1844 he commenced business in the then small town of Danville, as a manufacturer of tobacco. A better location could not have been selected for the business in which he proposed to engage, situated as it is, in one of the finest tobacco-growing sections to be found in any State. With this advantage, aided by the superior skill as a manufacturer, which his fine intelligence enabled him to acquire in a short time, he found but little difficulty in securing for his brands a reputation which always insured for the products of his factory a ready sale in any market at highly remunerative prices. This branch of business was conducted under his immediate supervision for about seventeen years, or until 1861, with a result which enabled him at that time to rank among the most wealthy and influential men of the State. The investment of the large profits arising from his business was principally made in real estate, and hence it was, that at the close of the war, he found himself in much better condition than many others who had made large investments in a species of property which lost its value by the result of the war.

The present growth and prosperity of the flourishing little city of Danville, are attributable, in a great degree, to the public spirit, the liberality, and the indomitable energy of Maj. Sutherlin, who has always taken the deepest interest in whatever concerns the prosperity of his adopted town: and the numerous positions of trust and honor which have, from time to time, been accorded to him, are the best evidences of the high estimation in which he is held by those who know him best. Some of these may be enumerated as follows:

In 1845, he was an active and influential member of the Town Council.

From 1846 to 1861, he was Mayor of the Town.

In 1858, he was the principal agent in establishing the Danville Bank, of which flourishing institution he was President until 1865, when like all similar enterprises, it was broken up by the result of the war. His administration of the affairs of this institution was such as to increase its capital stock from \$100,000 to \$300,000 without the loss of a single dollar in bad debts, up to the commencement of the war.

In the spring of 1861, he was elected as a Union delegate to the State Convention, and faithfully responded to the wishes of his constituents, upon the momentous questions which engaged the attention of that body, using his talents and his influence in preventing, if possible, the dire calamity by which the country was then threatened: but when it became evident that war was inevitable, he took his position on the side of the South, and nobly maintained with his influ-

ence and his means, throughout the fearful conflict which ensued, the position which his love for his native South compelled him to assume.

After the adjournment of the Convention, the war having been fully inaugurated, he was appointed commandant of the military post which had been established at Danville, by the Confederate Government, which position he held until that gallant officer, Col. Robert E. Withers, became so severely wounded in an engagement with the enemy near the city of Richmond, as to incapacitate him for active duty in the field, in consequence of which, on the application of Maj. Sutherlin, he was relieved from his position, and Col. Withers succeeded him.

In addition to his other onerous duties as commandant of the post, Maj. Sutherlin filled the responsible position of Chief Quartermaster at Danville, until a few months before the close of the war, when he was compelled to resign his position in consequence of his failing health.

After the evacuation of Richmond, his elegant and hospitable mansion at Danville became the headquarters of President Davis and a portion of his cabinet, until the surrender of General Lee at Appomattox Courthouse.

Since the close of the war, Maj. Sutherlin's attention has been turned to agricultural pursuits, and to such other enterprises, as in his opinion, were best calculated to promote the material interests of the country. In this new field of labor he has found ample scope for his diversified talent, in the cultivation and improvement of his large landed estates which lie in the States of Virginia and Georgia, comprising about 7,000 acres of land of the finest quality, besides his numerous valuable lots and buildings in Danville. His farms in Virginia, twelve in number, are being skilfully and successfully cultivated under his general supervision, aided by the skill of first-class managers. All the appliances of labor-saving implements, fertilizers, &c., have been liberally provided, regardless of expense; and by the extensive cultivation of clover, the value of his lands has been greatly increased, whilst his crops of tobacco, grain and hay have been quite abundant. His success as a breeder of fine stock of every description has not been equaled by any man residing in the same section of country.

In 1867, the Border Agricultural Society of Virginia and North Carolina was successfully inaugurated chiefly through the instrumentality of Maj. Sutherlin, of which society he has been elected president continuously, with the exception of two or three years, when he filled the position of president of the State Agricultural Society.

In 1871, he was elected a delegate to the State Legislature for two years, at the end of which time he declined a re-election in consequence of his numerous other engagements.

He has been a director of the Richmond and Danville Railroad Company since 1865, in which improvement he is largely interested as a stockholder.

For the past two years he has been an active member of the "Patrons of Husbandry;" is Master of the "Border Grange" at Danville, and President of the Border Grange Bank which has been securely established in that city. To the interests of this growing organization much of his time has been devoted in visiting different sections of Virginia and North Carolina, for the purpose of arousing a spirit of enthusiasm among the farmers by his plain, practical, common sense speeches, for making which, few men are better qualified.

Such a man may well be considered a valuable acquisition to any community in which the spirit of progress has not become wholly extinct. If we had a Sutherlin in every county throughout the State, Virginia would soon become what her natural advantages entitle her to be, and what she ultimately will be — the Banner State of this Union.

He is now in the prime of life, retaining the same degree of energy that actuated him in early life, and promises yet to live many years in the performance of those duties for which nature seems to have designed him.

BOTTOM TOUCHED.

Dry Goods at Lower Prices than Ever.

Money saved by buying your Dry Goods from Levy Brothers,

Who have made large purchases since the recent decline.

Fancy Grenadines at $8\frac{1}{2}$ ¢, 10 and $12\frac{1}{2}$ ¢ per yard, worth $16\frac{2}{3}$ ¢, 20 and 25¢; Rich Styles Fancy Grenadines at $16\frac{2}{3}$ ¢, 20, 25, 30 and 35¢, worth from 25 to 50¢.

Black Grenadines in all qualities from $12\frac{1}{2}$ ¢ up to \$2.25 per yard—this embraces not only the cheapest, but best assorted stock ever offered in this city;

Ecu Linen Tussore Suiting at $8\frac{1}{2}$ ¢ per yard, worth $16\frac{2}{3}$ ¢; at $12\frac{1}{2}$ ¢, would be a bargain at 25¢; at $16\frac{2}{3}$ ¢, worth 30¢—these goods must be seen to be appreciated; Silk-Warp Japanese Stripes and Plaids at 30¢ per yard, worth 50¢.

Japanese Cloth at $12\frac{1}{2}$ ¢, worth 25¢; Wash-Poplins, best goods manufactured, at $12\frac{1}{2}$ ¢ and 15¢, worth $16\frac{2}{3}$ ¢ and 25¢; Debeiges, at 25, 30, 35, 40 and 50¢. These goods can be had in all the new shades;

New style Plaid Dress Goods from 25 to 50¢ per yard—a reduction of from twenty-five to fifty per cent. has been made in these goods; Fast-Colored Lawns at $8\frac{1}{2}$ ¢, 10, $16\frac{2}{3}$ ¢, 20, 25, 30, $37\frac{1}{2}$ ¢ and 50¢;

Also, at the lowest prices, Pongees, Mohairs, Japanese Silks, Jaconets, Cambrics, Linen Lawns, and all other styles of fashionable dress goods: Black Alpaccas at 25, 30, 35, 40, 45, 50, 60, 75, 85, 90¢, \$1 and \$1.25;

Australian Crepe at 50, 60 and 75¢, worth 65¢, 75¢ and \$1; Yard-wide Printed Percales and Cambrics at $12\frac{1}{2}$ and $16\frac{2}{3}$ ¢ per yard—regular prices, $16\frac{2}{3}$ and 25¢;

Victoria Lawns at $16\frac{2}{3}$ ¢, 20, 25 and 30¢; also, Piques at $16\frac{2}{3}$ ¢, 20, 25, 30, 35 and 40¢—all remarkably cheap; Swiss Muslins from $12\frac{1}{2}$ ¢ up to 50¢ per yard—all very cheap;

Checked and Striped Nainsook Muslins, Checked and Striped Swiss Muslins; Corded, Striped and Figured Piques—all at extraordinary bargains;

Lonsdale Cambric, first quality, one yard wide, at $16\frac{2}{3}$ ¢ per yard; Knight's Cambric, 33 inches wide, at 10¢, would be a bargain at $12\frac{1}{2}$ ¢;

Utica Sheetting, 10-4 wide, in remnants from two and a half up to ten yards, at 40¢ per yard; 50¢ is the regular price everywhere; Remnants of Dress Goods of every description to be sold at less than half value;

Black and Colored Silks at lower prices and in greater variety than at any other establishment in this State; Embroidered Curtain-Muslin, one yard wide, at 25¢, worth $37\frac{1}{2}$ ¢;

Hamburgh Net for Curtains, at 20, 25, 30, 35, 40, 50¢, and up to \$1 per yard; Hamburgh Lace Curtains from \$4 to \$30 per set for two windows; Hamburgh Lace Lambrequins, from \$2 50 up to \$5 a pair—all very cheap and desirable;

Window-Shades in great variety, among which will be found an exact imitation of lace shades, now so fashionable; A large assortment of Curtain Fixtures, such as Cornices, Bands, Loops and Hooks;

Black, White and Ecu Hamburgh Nets, at a reduction of 50¢; A full assortment of Laces suitable for trimming; A large assortment of Silk Neck Scarfs and Ties; Also, Black Lace Scarfs and White Lace and Muslin Scarfs;

Ready-Made Dresses for ladies in all of the latest styles, from \$3 to \$25; A full assortment of Under-Garments at extraordinary low prices; A large assortment of Ducks and Drillings for boys' and men's wear;

Sash Ribbons at 25¢, 30¢, 35¢, 40¢, and 50¢, and up to \$1.25 per yard—all extraordinarily cheap; A full assortment of Ribbons from a half-inch up to seven inches at the lowest prices; Gauze Shirts for men and women—some as low as 40¢ for men;

Bustles in all the new styles; also, Hoop Skirts and Balmorals; Matting, Oil-Cloths, Rugs, Carpets, Mats and Hassoeks; Rubber, Jet and Gold Plated Jewelry in great variety; Summer Shawls, Lace Points and Jackets;

Black Grenadine Shawls at \$3, worth \$4; Laces and Embroideries in endless variety at low prices; Goodrich & Barnum's Tuckers at 75¢; Machine Needles at 4 and 5¢; Machine Oil in large bottles at 15¢;

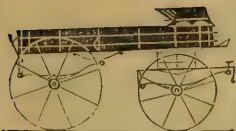
Clark's and Coat's Spool Cotton at 70¢ per dozen;

And thousands of other articles not enumerated in this advertisement.

Prompt attention to orders.

july—tf

LEVY BROTHERS, *Richmond, Va.*



W. C. SMITH,

MANUFACTURER OF

SPRING WAGONS, BUGGIES, &c



I have on hand and make to order on short notice. Carriages, Buggies and Spring Wagons, with special reference to the wants of farmers. Light running and strong, of any desired capacity. Workmanship and material guaranteed. Prices lower than the same quality of work can be bought at in this or any other city. Orders solicited. Letters of inquiry promptly answered.

Repairing promptly and reasonably done.

W. C. SMITH,

my-6m

308 Fifth Street, Richmond, Va.

WAGONS! WAGONS!

The subscriber has on hand

WAGONS AND CARTS

of various descriptions, that he wishes to dispose of on very moderate terms, and is still manufacturing others, and solicits a call from all in want of any article in his line, and he guarantees good workmanship, and first-rate material.

A. B. LIPSCOMB,

my

116 Cary Street, between Adams and Jefferson.

CHESAPEAKE AND OHIO R. R.

On and after SUNDAY, June 13th, 1875, passenger trains will run as follows:

FROM RICHMOND:

Leave Richmond,	9.30 A. M.	9.10 P. M.
Arrive at Gordonsville,	12.45 P. M.	12.30 A. M.
Arrive at Washington,	7.33 P. M.	6.33 A. M.
Arrive at Charlottesville,	1.45 P. M.	1.24 A. M.
Arrive at Lynchburg,	4.50 P. M.	4.50 A. M.
Arrive at Staunton,	4.10 P. M.	3.30 A. M.
Arrive at Goshen,	5.56 P. M.	5.14 A. M.
Arrive at Millboro',	6.17 P. M.	5.36 A. M.
Arrive at Covington,	7.51 P. M.	7.06 A. M.
Arrive at Alleghany,	8.59 P. M.	8.14 A. M.
Arrive at White Sulphur,	9.15 P. M.	8.32 A. M.
Arrive at Hinton,	12.15 A. M.	10.35 A. M.
Arrive at Kanawha Falls,	4.20 A. M.	1.25 P. M.
Arrive at Charleston,	6.15 A. M.	3.25 P. M.
Arrive at Huntington,	8.30 A. M.	5.45 P. M.
Arrive at Cincinnati,		6.00 A. M.

Train leaving Richmond at 9.30 A. M. runs daily, (Sunday excepted) stopping at all regular stations.

Train leaving Richmond 9.10 P. M. runs daily stopping at all regular stations west of Alleghany.

Accommodation train leaves Richmond for Gordonsville and all intermediate stations daily (Sunday excepted), at 4.30 P. M.

Pullman Sleeping Car runs on 9.10 P. M. train between Richmond and White Sulphur.

For further information, rates, &c., apply at 826 Main Street, or at Company's offices.

CONWAY R. HOWARD,

General Passenger and Ticket Agent.

W. M. S. DUNN, Engineer and Sup't Transportation.

jy

CHESTNUT GROVE Stock Farm and Poultry Yards, McKEAN & HULICH, EASTON, PENN.

Fine Bred and English Draft Horses, Asiatic Poultry and Fancy Pigeons, Light and Dark Bramas, Buff. Partridge and White Cochins, Antwerps, Carriers, Barbs, Owls, Magpies and Almond Tumblers.

POULTRY took fifteen Society and nine Special Premiums on Fowls and Chicks, and seven on Pigeons at Lehigh Valley Poultry Exhibition, held at Allentown, January, 1875.

FOR SALE Fine Bred and Draft Stallions, Gold Dust and other Colts. Eggs, Chicks and Pigeons in season.


RICHLAND STOCK FARM, NEAR QUAKERTOWN, PA.

THOMAS L. McKEAN, Proprietor, P. O. Easton, Pennsylvania.

PURE BRED SHORT-HORN CATTLE, JUBILEES,

LOUANS, YOUNG MARY'S, &c.

The above stock has been removed from Chestnut Grove Farm, and on hand and for sale at reasonable prices. Parties wishing to examine the Herd will be met at Quakertown Station, (which is one and a quarter hours ride from Philadelphia, via N. P. R. R.) by writing in advance to the Proprietor, at Easton, Pa.

 Catalogues and Circulars upon application.

May—tf

Notice to Wheat Growers.

Reduction of Price of

ZELL'S

CELEBRATED

Ammoniated Bone Super Phosphate,

Unrivalled for the wheat crop. For sale by agents and dealers throughout the country.

PRICE, \$45.00 per ton, at Baltimore.

“Dissolved Bone Super Phosphate” supplied to manufacturers and dealers at low figures.

We are prepared to furnish Granges with an “Ammoniated Bone Superphosphate of a standard quality, adapted to grain crops, at very lowest price.

P. ZELL & SONS, Manufacturers,

aug—3t

30 South St., Baltimore, Md

G. W. ROYSTER.

J. B. LIGHTFOOT,

G. W. ROYSTER & CO., Commission Merchants, RICHMOND, VIRGINIA.

Solicit Consignments of Tobacco, Grain, Flour and Produce Generally

Refer by Special Permission to J. W. LOCKWOOD, Cashier National Bank of Va., Richmond; ISAAC DAVENPORT, Jr., Pres. First National Bank, Richmond.

Grain Bags furnished on application.

aug—ly

PEAR TREES FOR THE MILLION.—Largest stock in the West; extra quality; packed to go safely any distance. Satisfaction guaranteed. Prices low by hundred or thousand. A full assortment of other trees, shrubs, plants, etc. Send list of wants for prices. R. G. HANFORD, Columbus Nursery, Columbus, Ohio.

sep—21

GAME BANTAMS.—My Black Reds and Duck wings have won both first, second and special premiums wherever shown, viz: At Hartford, 1871; Albany, 1872; Philadelphia, 1872; Worcester, 1874; Philadelphia, 1875; and Buffalo, 1875. Also, a few very choice Black Red Games for sale. Eggs, \$5 per dozen for Bantams, \$6 for Games. Address, with stamp, E. K. SPAULDING, Cedar Creek, Ocean Co., N. J.

sep—17

VIRGINIA LANDS.

UPPER JAMES, REAL ESTATE AGENCY.

BY WILLIAM HOLMAN,

Cartersville, Va.

Who offers for sale upwards of 20,000 acres of land, lying in one of the most desirable regions of Eastern Virginia.

Catalogues sent on application.

[Mr. Holman is one of the most reliable farmers in the State. Those wishing to buy land should send for his Catalogue].

Aug—17

The Fruit Recorder and Cottage Gardener



will be sent free 3 months to all who will send us a 3 cent stamp to prepay postage, as law now requires prepayment of postage. We do not ask any one to subscribe for

our paper until they know what they are to get. It speaks for itself. Price only \$1 per year. Purdy's Small Fruit Instructor is a work of 64 pp. that tells in simple language just how to grow fruits in abundance for home use or market. Price, 25 cents postpaid.

A. M. PURDY, Rochester, N. Y.

SUI GENERIS.



MASON & HAMLIN CABINET ORGANS.

UNEQUALED if judged critically, UNAPPROACHED in capacity and excellence by any others. Awarded

THREE HIGHEST MEDALS

AND DIPLOMA OF HONOR AT VIENNA, 1873; PARIS, 1867.

ONLY American Organs ever awarded any medal in Europe, or which present such extraordinary excellence as to command a wide sale there.

ALWAYS awarded highest premiums at Industrial Expositions, in America as well as Europe. Out of hundreds there have not been six in all where any other organs have been preferred.

BEST Declared by Eminent Musicians, in both hemispheres, to be unrivaled. See TESTIMONIAL CIRCULAR, with opinions of more than One Thousand (sent free).

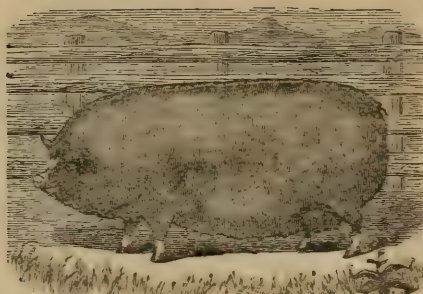
INSIST on having a Mason & Hamlin. Do not take any other. Dealers get LARGER COMMISSIONS for selling inferior organs, and for this reason often try very hard to sell something else.

NEW STYLES with most important improvements ever made. New Solo and Combination Stops, Superb Etage and other Cases of new designs.

PIANO-HARP CABINET ORGAN An exquisite combination of these instruments.

EASY PAYMENTS. Organs sold for cash; or for monthly or quarterly payments; or rented until rent pays for the organ.

CATALOGUES and Circulars, with full particulars, free. Address MASON & HAMLIN ORGAN CO., 154 Tremont Street, BOSTON; 25 Union Square, NEW YORK; or 80 & 82 Adams St., CHICAGO.



Imported Berkshire Sow, "Swanwick's Pride,"
Winner of HIGHEST PRIZE, at ROYAL SHOW ENGLAND
and FIRST PRIZES in Ohio, Penna., Md., and Va.
Under One Year Old.

JERSEY CATTLE.

*Berkshire and Short-faced York-
shires a Specialty.*

GLENDALE STOCK FARM.

Bred from the most noted and *FASHION-
ABLE STRAINS* of IMPORTED and PRIZE
WINNING STOCK. Selected with great care
from the best Herds and Pens, regardless of
expense.

I guarantee satisfaction.

For Correspondence and orders solicited.

Address **CHAS. B. MOORE,**

sej. "Glen Dale Farm," Christiana, Pa.

FARMERS AND DEALERS

PURE FINE GROUND BONE,

PURE BONE FLOUR,

PURE DISSOLVED BONE ASH,

Pure Dissolved Raw Bone.

66° Oil Vitroil, German Potash Salts,
Pure Chemicals for making Superphos-
phate at the lowest market price.

Call at **R. J BAKER & CO'S.**

Aug—1v

WALNUT GROVE FARM.

THOROUGHbred and GRADE JERSEY
CATTLE, BERKSHIRE and ESSEX SWINE,
BRONZE TURKEYS and BRAHMA FOWLS.

I took 1st premium on Thoroughbreds, (Male
and Female, and 1st premium on Grade Jerseys,
also, 1st on Bronze Turkeys at Va. State Agicul-
tural Society, 1874.

Prices moderate—Satisfaction Guaranteed.

Address,

G. JULIAN PRATT,

mar—1y Waynesboro, Augusta co., Va.

Terms of advertising

of Planter and Farmer:

One square, 10 lines or less, one insertion.....	\$2 00
1 square of ten lines for six months.....	10 00
1 square of ten lines for one year.....	15 00
1 page six months.....	30 00
1 page one year.....	55 00
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1 page one year.....	100 00
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THE
VIRGINIA
WINE
AND
CIDER MILL

Is superior to any MILL now made, and more sold annually in this market than of all other kinds combined. It does not grate, but thoroughly crushes every fruit cell, insuring all cider the apples will yield.

Send for Catalogue.

ly-1y

CHAS. T. PALMER,
1526 Main Street, Richmond, Va.

G. F. WATSON'S
FURNITURE WORKS,
RICHMOND.

Having timber tracts in this State sufficient to last several years, with a complete lumbering rafting, and saw-mill organization of fifty men, together with one of the most complete factories in the country located in this city, can furnish Poplar and hard wood (no soft pine) low-priced FURNITURE as cheap as any factory No. 10 or West—and fine Walnut FURNITURE cheaper. A stock of one million feet of lumber insures seasoned work, warranted in this and every respect. Manufacture MATTRESSES of all kinds.

Lumber-mill, Indiantown, Va.; Factory, Rocketts street; lumber-yards, Ash and Poplar streets; warerooms, No. 18 Governor (Thirteenth streets,) Richmond.

FARMERS AND DEALERS
Pure Fine Ground Bone

PURE BONE FLOUR. PURE DISSOLVED BONE ASH. PURE DISSOLVED RAW BONE

66° OIL VITRIOL. GERMAN POTASH SALTS. Pure Chemicals for making Superphosphate at the lost market price. Call at

R. J. BAKER & CO'S.

SOLUBLE PACIFIC GUANO,

FOR TOBACCO, CORN AND OTHER CROPS.

After ten years' continuous use throughout Virginia and the South, Soluble Pacific Guano has acquired a reputation for reliability equal to that formerly enjoyed by the Peruvian Guano, and the quantity used annually exceeds that of any other fertilizer.

It has been the aim of all connected with this guano to produce the best possible fertilizer at the lowest possible cost, and we claim that the unusual resources and facilities of the manufacturers have enabled them to approach this more nearly than has been done in any other fertilizer with which we are acquainted. Those who have been using it unite with us in the opinion, that by its use the consumer gets

THE GREATEST BENEFIT FROM THE SMALLEST OUTLAY.

We offer it with great confidence for use on the Tobacco and other crops to be grown in 1875, with the assurance that it is, in all respects, equal to what it has been in the past.

PURE PERUVIAN GUANO,

AS IMPORTED.

We have a full supply of **No. 1 Guanape Peruvian Guano**, from the Government Agent in New York, selected from one of the most cargoes ever imported. It is dry and in beautiful order, and contains within a fraction of **13 per cent. of Ammonia**, which is within two per cent of what the old Chincha Peruvian used to contain—in fact, it would be difficult to tell one from the other.

We offer these standard and thoroughly tested fertilizers for Tobacco, Corn, and all Spring Crops, and are prepared to sell them at such prices as will make it to the interest of consumers and dealers to purchase their supplies of us instead of sending their orders to New York, or elsewhere.

For farther information and supplies, address,

ALLISON & ADDISON,

mar—tf

Seed and Guano Merchants, Richmond, Va

ST. JAMES HOTEL,

RICHMOND, VA.

Pleasantly located on Twelfth Street, facing Bank Street and the Capitol Square. In the centre of the business portion of the city, within one square of the Post Office and Custom House, it is, by its retired location opposite the southeast corner of the beautiful park surrounding the Capitol of Virginia, the most quiet hotel in Richmond.

The proprietor having had a life long experience in hotel business—first at the Everett House, New York, and afterwards as proprietor of the Spotswood Hotel, Richmond, in its best days—and now assisted by **MR. JOHN P. BALLARD**, the popular veteran hotel-keeper of Virginia, assures visitors of the **ST. JAMES** that no effort on his part will be spared to make them comfortable and to keep the house in first-class style. Coaches will attend the arrival of all trains. Elegant carriages are at all times at the service of the traveling public.

june

T. W. HOENNIGER, Proprietor.

FALL STYLES, 1874.

CHARLOTTESVILLE WOOLEN MILLS SAMPLE CARDS

Are now ready for mailing. Our assortment embraces

TWENTY-FOUR PATTERNS.

Merchants desiring samples, will please address,

CHARLOTTESVILLE WOOLEN MILLS,
CHARLOTTESVILLE, VA.

TO PLANTERS.

JAS. G. DOWNWARD, Pres't.

JOHN WHANN, Sec'y and Treas.

Powhatan Phosphate Company,

RICHMOND, VA.

MANUFACTURERS OF

POWHATAN RAW BONE PHOSPHATE

The above brand of Phosphate is used and highly recommended by the best wheat raisers in Virginia. It is, in every respect, a first class Fertilizer for wheat. A trial will convince you of this fact.

H. D. Twyman, of Orange county, writes us that it exhibited itself finely. He applied 150 pounds per acre, and made 14 bushels to one seeded.

T. W. Bond, of the same county, tells us, in a letter dated Aug. 10, 1875, that it gave entire satisfaction on the estate of the late John Bond, and gave us another good order.

J. G. Dulaney, of Green county, writes: "After a test of your Powhatan Raw Bone Super Phosphate for two seasons on my wheat crop, I feel satisfied that it is one of the best fertilizers now offered in the market."

R. R. Porter, of North Carolina, writes: "The Powhatan Raw Bone Super Phosphate, which I bought of you last season, was the best fertilizer I ever had on my plantation. I used it on wheat, and, I think, raised double the quantity as when I used no fertilizer. I also used it on tobacco, and it acted like a charm."

We also manufacture Pure BONE MEAL and BONE FLOUR, and will be pleased to furnish samples of any of our brands on application.

IMPROVE YOUR STOCK.

FOR SALE—Alderney and Durham Cattle. Cotswold and Shropshire Lambs and Berkshire Swine.

PREMIUM ALDERNEY BULL, "EZRA"

three years old. Sire Imp. Hannibal (618); Dam Lily (500). Price \$100.

PREMIUM ALDERNEY BULL "GOLD DUST" two years old. Sire Imp. Southampton (117); Dam California (344). Price \$80.

ALDERNEY BULL CHATHAM,

eighteen months old; now fit for service. Sire Sudbrook (1262); Dam Imp. Rose Harebell (3243) solid color, black points. Price \$80.

ALDERNEY BULL CALF ACCIDENT,

three months old. Sire Saladin (447); Dam Minerva (341); one of the best Jersey cows in the State. Price \$50.

All the above are from Herd-Book Stock, and can be entered in next volume of Herd Book.

HERDBOOK ALDERNEY BULL SUDBROOK (1262),]

nine years old; bred by J. Howard McHenry; one of the finest bulls in the State. Price \$100.

PREMIUM ALDERNEY BULL HANNIBAL,

four years old. Sire Imp. Hannibal (618), Dam pure Alderney Cow, but not registered: took 1st Premium State Fair 1873. Price \$80;

DURHAM BULL STONEWALL,

bred by James Gowen of Pennsylvania, roan color, of fine size, and splendid form. Price \$100 worth twice the money.

TWO DURHAM CALVES (Heifer and Bull),

four months old, roan color. Price \$30 each.

COTSWOLD AND SHROPSHIRE LAMBS;

at from \$10 to \$15 each.

BERKSHIRE PIGS,

from best stock in the State. Price \$8 single pig, or \$15 per pair.

The above prices are one-fourth less than Northern prices for such stock. Address

A. P. ROWE,

Fredericksburg, Virginia.

SAUL'S NURSERIES, Washington, D. C.

The undersigned offers a fine stock of the following NEW PEARS: Souvenirs du Congress, Beurre 'd' Assumption, Pitmaston Duchess, &c. NEW PEACHES: Early Beatrice, Early Louisa, Early Rivers, Early Alexander, &c., with a collection of new peaches raised by T. Rivers. FRUIT TREES: An extensive stock of well grown trees, pear, apple, cherry, plum, apricot, &c.; grape vines, small fruits, &c. EVERGREENS: Small sizes suitable for Nurserymen, as well as larger stock in great variety.

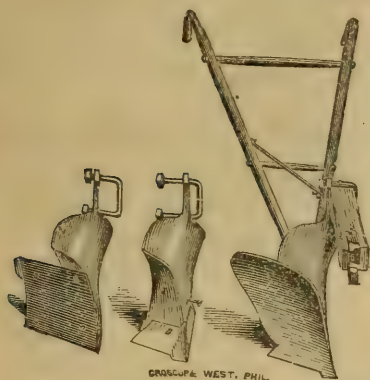
DUTCH BULBS.—Large importations direct from the leading growers in Holland, first quality Bulbs: Hyacinths, Lilies, Tulips, &c., new and rare; Green-house plants for winter blooming; New Clematises, a fine collection; New Wisterias; roses new and rare. A large stock grown in four and five-inch pots—prices low. New Rose, Duchess of Edinborough, at reduced rates. Primula Japonica—stony—in five inch pots. Catalogues mailed to applicants.

sep—tf

JOHN SAUL, Washington City, D. C.

THE WATT PLOW

VICTORIOUS ON EVERY FIELD!



A combined TURNING PLOW, CULTIVATOR, SUBSOILER, ROW-OPENER, PEANUT-DIGGER, TOBACCO and COTTON SCRAPER and SWEEP.

No CHOKING when bright and smooth; no LABOR to the plowman; ONE-THIRD LESS DRAUGHT to the team; thorough BURIAL of Weeds, Grass, &c.; great STRENGTH, Durability and Economy in its use, and complete pulverization of the soil.

FARMERS WHO USE IT WILL USE NO OTHER.

Awarded all the Premiums at every Fair attended in 1873.

Awarded First Premiums at every Fair attended in 1874.

Virginia State Fair, Richmond—FIRST PREMIUMS ON THREE AND FOUR-HORSE PLOWS.

Right and Left Hand—ALL PREMIUMS AWARDED THEIR SIZES.

Also at the Plowing Match ALL PREMIUMS AWARDED WHITE PLOWMEN were taken with WATT PLOWS of ONE, TWO, THREE and FOUR-HORSE SIZES; and COLORED PLOWMAN by ONE, TWO and THREE-HORSE SIZES; being

SEVEN PREMIUMS OUT OF EIGHT.

The superior work done by the WATT, and the complete ease with which it is handled, was apparent to all.

NORTH CAROLINA STATE FAIR, Raleigh, October 10th;

GEORGIA STATE FAIR, Atlanta, October 19th;

SOUTH CAROLINA STATE FAIR, Columbia, November 10th;

STAUNTON, VA., October 13th;

LYNCHBURG, October 20th;

WELDON, N. C., October 20th;

ORANGEBURG, S. C., November 3rd;

CHARLOTTE, N. C., November 3rd;

DANVILLE, VA., November 3rd;

POINT PLEASANT, W. VA., October.

Thus, with its great reputation before, it has gained new laurels this year, which must convince every farmer of its vast superiority over other plows.

We warrant every plow sold to be as represented or to be returned to us. We solicit a trial. Catalogues sent to any address.

WATT & CALL,

SOLE MANUFACTURERS,

1452 Franklin St., Richmond, Va.

Special Agents for "The Best" Spring-Tooth Horse-Rake and Gleaner; also for sale of our own manufacture, HARROWS, CULTIVATORS, and all kinds of IMPLEMENTS at lowest prices—all warranted.

BURDETT ORGAN.

I have a NEW BURDETT ORGAN which I will sell for \$150—Manufacturer's price \$175—Boxed and delivered at any Depot or Wharf in Baltimore. Terms of payment accommodating.

L. R. DICKINSON.

Also, THREE FIRST-CLASS SEWING MACHINES which will be sold at a discount of *forty per cent.* on Manufacturers' prices.

TREES! TREES!

The Largest and most Complete Stock of fruit and ornamental Trees in the U. S.

Descriptive and Illustrated Priced Catalogues sent as follows: No. 1—Fruits, 10c. No. 2—ornamental Trees, now ed., with colored plate, 25c. No. 3—Green-house plants, 10c. No. 4—Wholesale—Free.

ELLWANGER & BARRY,

sep Mount Hope Nurseries, RO. HESTER N.Y.

NURSERY STOCK. FALL, 1875.

We desire to call the attention of Nurserymen and Dealers to our exceedingly large, thrifty, and great variety of stock for Fall trade.

Special inducements offered in standard Dwarf and Crab Apples: standard and Dwarf Pears, Cherries, Gooseberries, Currants, Elms, Maples, Evergreens, Shrubs and Roses.

Catalogues sent 8 Cents.

SMITH & POWELL,

Syracuse Nurseries,

Syracuse, N. Y.



BLATCHLEY'S

Improved Cucumber Wood Pump is the acknowledged standard of the market, by popular verdict, the best pump for the least

money. Attention is invited to Blatchley's Improved Bracket, the Drop Check Valve, which can be withdrawn without disturbing the joints, and the copper chamber which never cracks, scales or rusts and will last a life time. For Sale by Dealers and the trade generally. In order to be sure that you get Blatchley's Pump, be careful and see that it has my trade mark as above. If you do not know where to buy, descriptive circular, together with the name and address of the agent nearest you, will be promptly furnished by addressing with stamp.

CHAS. C. BLATCHLEY, Manufacturer,
mar-3m 506 Commerce St., Philadelphia, Pa.

Thoroughbred Stock for Sale.

I am breeding Thoroughbred Devon Cattle, Poland China, and Essex Hogs, South Down Sheep, &c. Also Light Brahma Fowls, and have for sale several pairs of White and Black Guineas. Persons ordering from me can rely on getting as good stock as any in this country. My herd of Devons are of the most improved strains. They took 7 first premiums at our last Virginia State Fair. For further particulars,

F. W. CHILES.

feb-6m

Louisa C. H., Va.

FRESH

GARDE and FIELD SEED
At the old stand of Palmer & Turpin,
1526 Main street, Richmond,
Orchard Grass.

Timothy, Herds, Clover,

Kentucky Blue Grass.

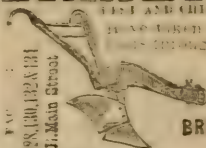
Send for Catalogue.

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W. H. TURPIN.

BRINLY PLOWS

BEST AND CHEAPEST IN USE.



BRINLY, MILES & HARDY
LOUISVILLE, KY.



TIN WIRE RINGS.

Will not make a Hog's

Nose Sore.

Hardware Dealers sell them.
Ranger, 315, East Range, 50c.
60c. Coppered Rings, 50c.
10 lbs., 2 lbs. by mail, post-
paid. SOLE MANUFACTURERS
DECATUR, ILL. patent. Copyright free.

CANCER! CANCER!!

Attention is called to the great success which has been achieved in the permanent cure of this loathsome disease, by the use of

Bendall's Eureka Cancer Salve.

Hitherto it has baffled the best medical skill and the poor unfortunate with this disease, clinging to their bodies and eating out their vitals, are left to drag out a miserable existence. Testimonials of the most convincing character are accumulating daily, and many heretofore incredulous are now entirely satisfied as to its inestimable value.

F. H. ROBERTSON & SON, Import-Apparel Office, Petersburg, Va., are the General Agents, to whom all letters for information, and orders for Salve should be addressed.

March 1f

ELLERSLIE FARM.

Thoroughbred HORSES.

Half Bred HORSES.

Pure SHORT HORN CATTLE.

Improved BERKSHIRES

For sale.

Price \$10 apiece.

Address

R. J. HANCOCK,

oct Overton, Albemarle co., Va

S. O. CHASE,

KILLINGLY, CONN.

Offers for sale a few Superior PART-RIDGE, COCHIN and PLYMOUTH ROCK CHICKS at reasonable prices. Also, White Fantail PIGEONS. oc

Maryland Eye and Ear Institute,

66 N. Charles St., Baltimore, Md.

GEORGE REULING, M. D., late Prof. of Eye & Ear Surgery in the Washington University, SURGEON IN CHARGE.

The large, handsome residence of the late Charles Carroll has been fitted up with all the improvements adopted in the latest Seminars of Europe, for the special treatment of this class of diseases. Apply by letter to

GEORGE REULING, M. D.,

oct-3m

Encourage Home Enterprise and buy McGruder's Fertilizer.

The most flattening accounts are being constantly received. For the past twenty years it has been manufactured in the city of Richmond and the thousands of tons sent out have given universal satisfaction. The price is just as low as a good article can be furnished at. For certificates call at office, corner Cary and Eleventh Streets. Herewith are two as a specimen:

Messrs. Currant & Co., Powhatan county, August 23, write that the effects of the fertilizer are all that is represented, and are wonderful on their growing crop of tobacco. In the dry summer of 1872, Dr. R. A. Patterson, with the use of 300 pounds McGruder's Fertilizer to the acre, made twenty-five bushels wheat on poor land, which was fallowed by a first rate clover crop. For further particulars, address,

sep—2t

CHAS. McGRUDER, Richmond.

Clawson Seed Wheat!

The undersigned, who introduced extensively to Virginia the celebrated Fultz, now offers a new, and in some respects, a superior variety—smooth, white, hardy and very productive. *Warranted Genuine.* Clawson, \$3.25, and Fultz, \$2.25 per bushel, including bags.

Address,

H. S. ALEXANDRIA,

sep—2t

Culpeper, Va

SEWING MACHINE EXCHANGE!

After a partial and temporary retirement from the Sewing Machine business, I now RESUME IT AGAIN IN ALL ITS BRANCHES.

Orders received for ALL KINDS SEWING MACHINES, ATTACHMENTS, NEEDLES, OIL, &c.

MACHINES FOR RENT! All kinds Sewing Machines repaired. Machines of any kind supplied to Grangers and clubs at the lowest manufacturers' prices.

G. DARBY.

oct—3t

821½ Main st., bet. 8th and 9th, Richmond, Va.

THE SOUTHERN PLANTER FARMER,

The Oldest Agricultural Journal Published in Virginia,

SIXTY-FOUR PAGES MONTHLY,

Forming a Handsome Annual Volume of 664 pages, with a copious index for the sum of

ONE DOLLAR AND FIFTY CENTS.

CLUBS OF FIVE OR MORE \$1 EACH.

THE SOUTHERN PLANTER AND FARMER

HAS NO SUPERIOR IN THE SOUTH, HAVING A LARGE CIRCULATION
AMONGST THE MOST SUBSTANTIAL FARMERS AND BUSINESS MEN

In the country—the best customers to every trade, not only on account of the substantial character of those to whom it is sent, but likewise by the fact that possessing the additional advantage of being in book form and stitched ; it is, therefore, more apt to be preserved than an ordinary newspaper and gives ADVERTISERS A BETTER CHANCE OF KEEPING THEMSELVES BEFORE THE PEOPLE!

AS AN ADVERTISING MEDIUM,

it furnishes a Cheap and Efficacious means of reaching the

Farmers of the whole Southern Country.

It goes into almost every neighborhood in Virginia and North Carolina, and also is largely circulated in West Virginia and the more Southern States.

TERMS FOR ADVERTISING.

Outside back Cover, double rates; inside back Cover, 50 per cent. added to rates. No advertisements taken for front cover. No editorial notice given to advertisements on any consideration, but notices, &c. may be put in *Publishers' Department* at contract prices.

No charge for advertisements of less than two dollars.

Bills of regular advertisers payable quarterly, if inserted for three or more months.

Payable monthly if inserted for less than three months. Transient advertisers, cash in advance.

To insure insertion, we should receive advertisements by the 25th day of the month preceding that in which they are to appear. We adhere strictly to our printed rates.

L. R. DICKINSON.

P. O. Box 54, Richmond, Va.

THE VIRGINIA PROTECTION LIFE INSURANCE COMPANY,

RICHMOND, VA.

Paid up Capital,	-	-	\$ 50,000
Authorized Capital,	-	-	200,000

Presents a plan by which the benefits of Life Insurance may be secured by all, at about one-third the usual cost.

Thirteen cents invested each day will secure to your family \$5,000.

No better investment can be made.

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DEVOTED TO

Agriculture, Horticulture, and Rural Affairs.

L. R. DICKINSON.....Editor and Proprietor.

RICHMOND, VA.,

NOVEMBER, 1875.

No. 11.

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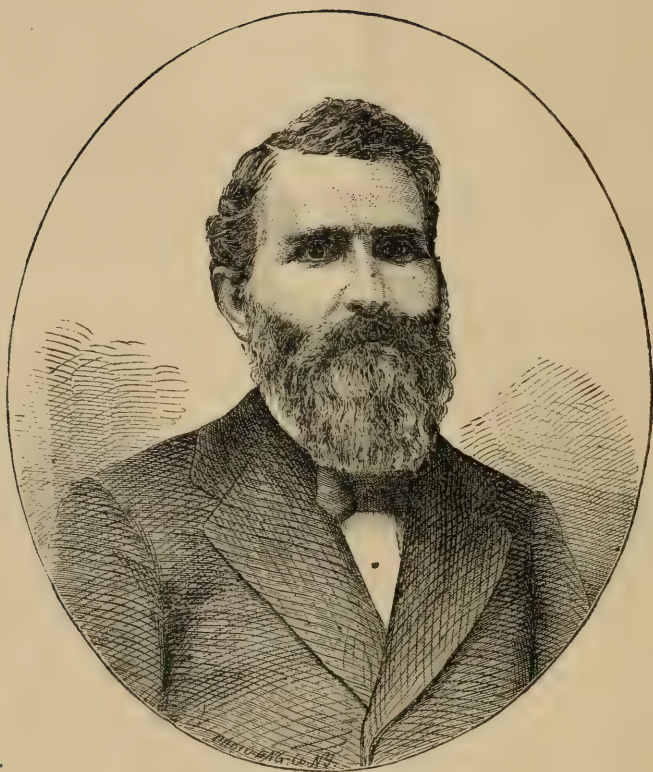
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Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON, EDITOR AND PROPRIETOR.

New Series. RICHMOND, VA., NOVEMBER, 1875. No. 11

[For the Southern Planter and Farmer.]

FARM MANAGEMENT OF THE SOUTHSIDE.

Our people of the Southside are, with sad unanimity, unprosperous in their agricultural pursuits. The crops that are cultivated do not, as we cultivate them, yield sufficiently remunerative returns; and it is difficult to find for them any promising substitute or means of adding diversity to our productions. This difficulty is partly due to the general scarcity of money and partly to the inveteracy of long-established habit. New pursuits require some expenditure to begin them; and the unvarying Southside curriculum of corn, wheat, oats and tobacco has been handed down to us from a remote ancestry. Year after year we are continuing to make the tobacco to pay the laborer, the corn to feed him, the oats for the teams, and the wheat to pay for guano. The excess, if any, is generally insufficient to pay taxes and the interest upon debts; and the proprietor is left, as his share of the year's results, house rent, fuel, vegetables and bread. His meat is usually purchased, and his fowls come by grace, or are raised by his wife.

The existing condition of this region is, to a very great extent, due to the robbing results of the civil war, of which, to an especial degree, it was the victim; but allowing to this its full effect, there is still among us a state of *impecuniosity* which might have been sensibly mitigated by rightly directed efforts. The soil is not at fault, nor are our productions unsuited to it; but with the blindness of fatuity we continue agricultural practices which are annually condemned by our own experience, and which, as an intelligent Englishman remarked, would "beggar England in ten years." Is there any country, except the freshly-settled ones, in which the exhaustive crops of corn, wheat, oats and tobacco could be expected to yield profitable returns to a population of farmers who make one of the distinctive features of their land its nakedness of live stock? We

have no facilities for the analysis of commercial manures—no skill in their scientific application to our especial wants—and, were these difficulties removed, no capital for profitable investment in them. Yet, green crops for feeding the hungry soil, cattle, sheep and hogs, which supply the pabulum of all other agricultural lands, are almost wholly neglected here; while our dependence is placed upon small quantities of manufactured manures, of the composition of which we know nothing; and these are usually applied to but one crop—tobacco. They are generally purchased upon credit—to be paid for, with about 15 per cent. interest, “out of the wheat.” A patch of wheat is seeded on the surface from which tobacco has been taken, and by half cultivating a broad expanse of poverty, a beggarly crop of corn is obtained—just enough “to last” by half starving the few animals kept upon the place. These are very few indeed. It is not unusual to find upon a farm of a thousand acres less than a dozen head of cattle, about as many hogs, and rarely is a sheep seen at all. The cattle pass the winter in the open air, where they are regaled upon wheat straw, and, naturally enough, at that season, afford an insufficient supply of milk and butter, even for domestic use. When grass puts out in the spring, they are just able to get to it, and the severity of their “winter keep” is not fully recovered from until the following July or August. The manure made from such sources is small in quantity and feeble in quality, and the residuum left by the winter rains is hauled out in the spring, and applied to the tobacco lot. Assisted by “about 200 pounds” of some one of the many fertilizers of the day, it yields in the fall five or six hundred pounds per acre of indifferent tobacco. The proceeds of this tobacco, after it has been manipulated during the succeeding winter and spring, will about pay the hire and support of the laborers, who have, from first to last, been employed upon it. The wheat crop, seeded upon the tobacco lot of the previous year, has been injured by chinch bug, too much rain, or too little, and yields but a “sorry crop”—just enough, perhaps, to pay for the fertilizer aforesaid, and supply seed and a few barrels of flour for the family. All the corn is necessarily reserved for home consumption, as is the crop of oats; and the baffled proprietor finds that, in spite of all the economy he supposes himself to have practiced, there are demands upon him which he has no means of meeting.

Such, it is believed, is the condition of a large majority of the farmers of the Southside region of the State. It is an artificial one. Our beneficent Maker has not stricken the land with the sterility all this would imply. He but requires of us the use of the means he has placed at our disposal. The proper application of these means are illustrated in every land where agricultural prosperity prevails. If we read the lesson aright, it would teach us, among other things, the actual necessity of limiting our cultivation to the area upon which we can do thorough work; of keeping, to the full capacity of our farms, improved stock of all kinds; of increasing the quantity and quality of home-made manures by fair feeding and precautions

against their waste; and of making profit from the manure machinery by the sale of beef, butter, mutton and wool.

Are none of these things possible to us? The heaviest cost we annually encounter, except in the gratification of our personal tastes and habits, is the pay and maintenance of laborers. Can we not reduce their number, and limit our cultivation to the surface which it is possible, in some way, to manure? If your present corn field of forty acres produces two barrels to the acre, can you not, by concentrating your efforts on one half of that surface—by green manures, thorough and timely culture—greatly increase the yield and sensibly diminish the cost of production? And will not this rule apply as well to all the crops you cultivate?

It is believed that these questions can be answered in the affirmative. The matters involved in them are of vital importance, and our necessities demand immediate action in the direction to which they point. Let the farmer who has satisfied himself that his occupation, as now conducted, is profitless, prepare at once for a "new departure." Let him begin the use of green manures, as the readiest and cheapest revenue at command—repeating, if necessary, upon the same surface. And should he obtain from them the benefit they elsewhere afford, let him not, after the good old Virginia custom, in such cases made and provided, forthwith abandon their use! He is poor, but he has a few cows. Let him contrive to feed and shelter them well during the coming winter, and, at the proper season, procure them access to a thoroughbred bull. By continuing such care and management for a few years, at the end of them he will have an improved herd, from which profit can be derived. Meanwhile, let him make good use of the *improved manure* which he will find to be at once accumulating. It is not probable that he has a sheep. Let him contrive to procure six, if no more, and, if it be possible, breed them to a thoroughbred ram. Keep all the ewe lambs, and begin to feed the flock sparingly in early winter, that their digestive organs may be able to manage the full feeding which hard weather will require. In a short time he will have as many sheep as he should have. Then, with a full herd and flock of improved animals, the further exercise of energy and common sense will greatly advance his position and prospects. They will not probably make a fortune for him, but will materially assist in securing bread, meat, and a home for his family. These blessings he now holds by a tenure which cannot even be called precarious. His efforts at rising out of his hereditary agricultural ruts will be greatly aided by the regular reading of one or more of the agricultural periodicals of the day. Without believing everything he finds in them, he can yet see what is elsewhere accomplished by the use of means which lie in his own reach.

The writer of this article, in but rehearsing to his fellow farmers what most of them know as well as he does, disclaims any assumption of uncommon wisdom, or the possession of its fruits. He is also their fellow sufferer; and the picture he has drawn would

scarcely be an exaggeration had he sat for it himself. He has, however, at a comparatively earlier date, become restless in traveling along the road to ruin, and earnestly looked out for some impediment to his progress in that direction. He hopes to have found it. Clogged in every effort by want of money, he has slowly adopted as many of the expedients here indicated as have, so far, been possible to him: and while no great results have yet been achieved, has already found grounds of encouragement. The manure from his farm, still discreditable in amount, has been nearly doubled, while the amplitude of his manure heaps has effected a great economy in the guano department. His place is assuming an air of improvement, and his efforts, if not actually cheered by "the gentle dawning of a bright success," are encouraged by the hope of their ultimately procuring, under the blessing of Providence, exemption from some of the ills that now so heavily press upon the disheartened rural population of Southside Virginia.

M. B.

Amelia County, Va.

[NOTE BY THE EDITOR.—It is an absolute luxury to see an example like this. Our correspondent is one of the most accomplished gentlemen in the State, and we can bear witness to his untiring devotion to its interests, and his lively concern in *everything* tending to ameliorate the condition of our people. In such examples is to be found the power that will silently but surely work for us the changes that our necessities demand shall be made.

The example of Father OBERLIN, in the *Ban de la Roche*, changed for the better in temporal things, a whole Department. Our people are blessed beyond anything he had to encounter, and should respond with proportionately less pressure, and we know they will if those in our midst, to whom fortune has been kindest, will not abate their interest in the general well-being; and will put this interest into *deeds*, as our correspondent has done.

We are glad to know that the condition of things, represented by our correspondent, is not universal on the Southside. We present an example: An estimable gentleman living in Surry county, gives this as *his* experience since the war: "I came out of the war without a dollar; I now own, paid for, three fine estates, and every cent of it was *made out of the land*." Upon being asked how he did it, when so many were complaining that there was nothing in the business, he answered, "By giving the same close and unremitting attention to my business that you people do in town to yours. I keep an absolutely accurate account with every field, and every person on my estates. I take nothing for granted, but *see* that everything is in the shape I desire it. I know of no possible business in which I can make money as rapidly as I am making it now, and hence have no desire to abandon farming. I might groan forever over my losses in the past, but that will not make my pot boil." Why, now, should this gentleman stand alone? Business ability is not confined to towns, it belongs to the race, and *must be exercised* if we expect to advance as other people have.]

It does not make much difference how intelligent a man may be in other respects, nor how much capital he has to start with; if he has had no experience in the business, he lacks the main element of success.

[For the Southern Planter and Farmer.]

FARMING AS A BUSINESS.

Problematical as it may seem to the casual observer, yet it is nevertheless true, that farming as a business in this country, and particularly in Virginia, pays less than any of the principal occupations of our people.

The able statistician, Col. J. R. Dodge, of the Agricultural Department, in the Report for 1873, uses the following significant language: "The returns for farm labor are substantially in *inverse ratio* to the numbers engaged in it." That is, that the census valuation of farm products are generally greater in those States having the largest proportion engaged in other industries, and *vice versa* smaller in those States having the largest percentage of their population engaged in agriculture.

Let us contrast the most exclusively agricultural States with those least so, giving the percentages of farmers and the value of farm products to each person engaged in agriculture. Some allowance must, of course, be made for differences in the fertility of soil and the facilities for transportation to market:

	Per Cent.	Value.
Mississippi.....	81.29	\$282
Alabama.....	79.84	231
South Carolina.....	78.48	202
North Carolina.....	76.64	214
Virginia.....	59.26	211
	Per Cent.	Value.
Nevada.....	6.69	\$801
Massachusetts.....	12.56	442
Rhode Island.....	13.30	404
New Jersey.....	21.32	676
Connecticut.....	22.05	606

In contrasting Virginia with New Jersey, we find that 59.26 per cent. of her population is engaged in agriculture, while in New Jersey only 21.32 per cent. are farmers; and while the value of the products in the former is only \$211 *per capita*, in the latter it is \$676—more than three times as much. Virginia has but 11.97 per cent. of her population engaged in manufacturing, while New Jersey has 34.95 per cent. thus engaged; demonstrating clearly, as Adam Smith said, that "a strictly agricultural community can never be a prosperous one," and proving the influence of manufactures on the profits of agriculture. The statistics prove also another significant fact: that while the 34.90 per cent. engaged in manufactures in New Jersey earn each, males and females, annually, \$432, the 59.26 per cent. of Virginia farmers earn only \$105.50. In order to ascertain the average earnings *per capita* of those engaged in agriculture in Virginia, we must take from the average value *per capita* of farm products \$211, the capital employed in the shape of lands, teams, tools, expenses, &c., which, for convenience, we estimate at one-half.

This gives us \$105.50 the actual earnings, which is too great, as any practical farmer knows, as the expenditure for labor is not half the cost of raising a crop.

The following is compiled from the census of 1870, showing the earnings of operatives in the several industries mentioned:

		Wages per Capita.
Manufacturers—General		\$377
Do.	Boots and shoes.....	463
Do.	Cotton.....	295
Do.	Wool.....	335
Do.	Iron.....	564
Do.	Leather.....	414
Do.	Tobacco.....	356
Mining		482

In some special manufactures requiring a high degree of skill the operatives earn much more, as in the manufacture of sewing machines they earn \$705 average.

In the above tables only average results are given. In glancing over them and contrasting the earnings in manufactures and mining with the pittance to the poor, hard-working farmer, is it any wonder that so many of our active, enterprising young men desert the farm for something that pays better? We must make farming more profitable, or they will continue to leave the avocation of their fathers.

To enumerate all the causes that operate to depress farm industry would swell this article much beyond its desired limits. Want of system, defective cultivation, and bad management, all operate to lessen the profitable results from the farm. But the greatest hindrance to, and weightiest incubus upon, profitable farming is the *Exchanging* element, aided by capital, combination, and corners that suck the life-blood of rural industry. Here colossal fortunes are made by depriving the hardy sons of toil out of their honest earnings. Aided by the professional element, they control legislation, State and Federal, that operates to confer the greatest good upon the favored few. It's a shame on our government that agriculture, which feeds all other industries, is barely left a meagre support, while other industries are fostered and encouraged to prey upon this foundation source of the nation's wealth. The legalized swindle of national banking robs the industries of the country annually of nearly twenty millions of dollars, filched mostly from the pockets of the agriculturists. Money is liberally used to influence legislation in robbing the honest working people and to promote schemes for wholesale plunder. Rings and combinations have grown insulting and exacting, and openly advocate measures to increase their predatory powers. The press of the country, the educators of the masses, controlled almost entirely by men whose interest it is to cheapen subsistence, is profuse in praise of farming and rural pursuits, and lavish in advice to farmers' boys to stick to

the farm. If the editors and writers had ever EARNED their bread "in the sweat of their faces" on the farm, and borne the heat and burden of the hay and harvest field, they would then know how hard and discouraging it is to labor for \$105 a year, the meagre competence for a year's hard work. Sentinels of the nation's safety! Guides of the country's progress! come to the rescue of the toiling masses who produce the meat and bread that feed and the staples that clothe the nation. Hard times are upon us, and no wonder, since agriculture languishes. Ceres, though loaded down with sheaves, stands ragged, sad and disconsolate, weeping o'er her forlorn subjects. Yours the duty to relieve, to sustain, and to cherish her. Provide no more subjects until those she has are better cared for. To drop this mythological figure, there is something radically wrong somewhere, when farm labor fails to afford a decent support. No wonder that our lands are depreciated and homesteads for sale, whose once thrifty and happy owners are now hopelessly bankrupt. No wonder our prisons are filled with the nation's wards, and large sums drawn annually from the State treasury to defray criminal prosecutions, the bulk of which is for thieving. Disguise it as you may, Virginia farmers cannot afford to pay at present more than a bare support to laborers when in health. When sickness comes into the cabin of the laborer, want comes along with it, and the inmates steal for a living.

The exchanging element would say, of any other commodity than subsistence, "increase the demand, and consequently the price, by limiting the supply." To raise no more than we can sell profitably, is the true economy. To reduce our surplus products to a paying standard, by a diversification of crops, and, as far as possible, raising everything and manufacturing what is needed on the farm, is the only way we can hope to succeed. To secure profitable diversification, we must increase the number of manufacturing industries, and bring about a healthier balance of supply and demand. We have only to follow in the lead of more prosperous communities to insure prosperity to our long-languishing industry. We must lessen the percentage of exchangers and increase the number of manufacturers; raise more grass, more stock, and more manure; hire less help and do more work, especially brain work, if we expect better results.

The picture we have drawn of Virginia farming, proven by facts and statistics, is indeed a dark one, but, nevertheless, it is true. If we would correct the evils that retard, and the wrongs that prey upon our industry, we must see our situation clearly and look our difficulties squarely in the face. Thank God, our situation is neither hopeless, nor the evils and wrongs that embarrass us irremediable. As a class, we are organizing for action. Slowly but surely will come deliverance and relief, if we are true to each other, to our families, and to ourselves. Self-interest, as well as the highest instincts of patriotism, demand that we shall assert our rights, promote our happiness, and elevate our calling. As we support all, we

must seek to promote the welfare of all, by laboring in every honorable way to secure and perpetuate an honest and just government. We must seek to arrest the evil tendency of the age. For—

“Ill fares the land, to hast’ning ills a prey,
Where wealth accumulates and men decay;
Princes and lords may flourish, or may fade;
A breath can make them, as a breath has made;
But a bold peasantry, their country’s pride,
When once destroy’d can never be supplied.”

Halifax county, Va.

R. L. RAGLAND.

NOTE BY THE EDITOR.—It is needless to commend the ability of Maj. RAGLAND, for we all know it. There is no sign of the times in Virginia so hopeful as the growing disposition to fight radical evils. Capt. Chamberlayne, elsewhere in this book, sounds the slogan of change, and we trust he will not lack followers as brave as he is. If the “exchanging element” works evil instead of good, it will have to be remodeled or abolished. If *anything* clogs the general progress, we are not true to ourselves if we cease our opposition until it is removed. But is not the trouble more deep-seated than the “exchanging element.” To us it appears to lie in the fatal policy we have ever pursued of *dividing our power instead of concentrating it*. SOBIESKI, than whom no cause ever boasted a truer knight, deemed his work thrown away, for Poland deserved to be a slave. Instead of harmony she had strife; and the great matter of her deliverance was sacrificed because her reason did not rise superior to internal difficulties, which were never solved, and which weighed as a feather against the vital issue of her life as a people. Are we a people in harmony? Witness the deplorable bitterness of feeling now existing between the towns and the country. Combinations of individuals for the purpose of self avail nothing against a general unity of interest; and this is proved, in the most unanswerable way, by the very figures the Major presents; for he shows that where manufactures prevail *the agriculturist is more than three times as well off* as where they do not.

We want a strong State, and never tire of declaiming about our resources. What have we done with these resources? Not taken practical interest enough in them to have even a collection made of them, to say nothing of the provision of a proper person to be ready at all times to explain where they are, what they promise, or anything at all about them. How have we induced the establishment of manufactures? By too often holding the rights to our available water-power at prices that nothing but an insane man would give; and so keeping them, as millstones around our necks, to impoverish us (for they must pay taxes) and our children after us. As the earth is of God’s making, and not ours, no man has a right to hold any portion of it without either putting it to use himself or letting somebody else do it. Where factories have been established, how have they been fostered? By diligently cursing the North, but sending to it for nearly everything we use. Wealth comes by the *conversion* of products as well as by the *growth* of them; and every laborer’s mouth to be filled in town helps the price of every laborer’s produce in the country. How do we provide markets for our products? States noted for rapid growth in wealth have one great central market, to which everything tends, because where there are the most buyers there will be found the most competition; and where there is the most competition there the best prices will be secured. This is a natural law too plain to be expounded. We in Virginia, on the contrary, have markets all over

the State, each one fighting the other, and none of them of sufficient prominence to make any particular figure in the markets of the country at large. And so on to the end of the chapter.

To make farming profitable, other things must be made profitable too, for a State is a complex affair; and it behooves our representative men, among whom the Major has long been prominent, to make the inquiry general and searching, and wherever defects exist (and we have shown they are not few) to see that a remedy is applied; and the sooner this is undertaken the better it will be for all of us.

That better legislation than we have had is needed, we suppose no one will deny; but how it is to be done, with the negro as a voter, we are not prepared to say. Thus far, sheep and suffrage have not worked together, and the sheep have invariably gone down. With the vote of the negro, and demagogues to use it, there is a right good prospect of our bearing for some time longer the ills we have in this direction; for, if we credit the announcements we see in the papers, about election time, signed "Many Voters," we are compelled to believe that men are to be found throughout the State who would not refuse to take office.

No laborer, whether white or negro, has occasion to steal, if he will work. That the latter do steal, is as old as the race.

"Negro," said I, "horrid demon—negro still, if slave or freedman—
Think again before you answer this one question, I implore:
Have you yet no sense of feeling—do you mean to live by stealing,
Or by working and fair dealing—tell me, tell me, I implore;
On your honor, as a negro, will you labor as before?"
Quoth the negro: "Nevermore."

[For the Southern Planter and Farmer.]

TOBACCO.

The tobacco crop this year is said to be much larger than is usually made these latter days. It being the only crop upon which the planter can most confidently rely for the means to meet the onerous taxation imposed upon him, an increased area was planted. There were fine seasons for its growth, time enough for it to ripen, and the finest sort of weather for housing it. There are many ways practiced in curing it. If it was desired to have it dark, it was cut and housed, and then, before it had time to yellow, moderate fires were left under it during the day until the leaf was cured, and then increased so as to dry the stem, taking some seven or eight days for the process; but the heat should never be so great at any time as to force the oil out of the tobacco along with the water it contains. Others, after curing the leaf—taking for the purpose some three or four days—would stop the fires, and fire afterwards in damp weather to keep it from getting in soft order, the which, if permitted too often, will stripe the tobacco and make it chaffy. If one desired to cure his tobacco bright, it was permitted to remain either in the house or on the scaffold, a little crowded, until sufficiently yellow—the time for which would depend upon the temperature of the atmosphere, it requiring a little warmth for the purpose; then firing as above. Then, too, some permit it to remain on the scaffold to cure as long as the weather is fair, then firing afterwards when likely to get too soft. Others again hang it up in their barns as soon as cut, and leave it to cure in its own way.

It having been thoroughly cured in *some* way, leaf and stem, the last of November, or any time thereafter when in supple order, it can be taken down and packed on platforms, lapping the tobacco about a foot, and weighted (but not very heavily), setting up pine bushes or wheat straw around the bulk to keep it from drying out. When the stripping commences, the tobacco should be well shaken to loosen it and to get rid of some of the dirt generally adhering to some of the lower leaves. A reliable hand should be selected to cull it, taking off the bottom leaves and those that are badly eaten by the worms. It is then thrown to an assorter, who looks over the plant hastily and throws it to the pile to which it belongs—to the long dark, or long bright, or short of both sorts, or separately, or to the lug pile. The long tobacco is tied up neatly in bundles of five leaves, with split ties of the same quality, taken most commonly from a torn leaf, or from one that has been injured by the worms. The ties should cover the ends of the stems and extend just low enough down—never more than an inch—to hold the leaves well together. Short tobacco is tied up in bundles of six leaves, and lugs of eight. The leaves in every bundle should be of the same length, except the lugs. The tobacco is packed as it is stripped, often in packs not longer than a tobacco stick; and when the stripping is completed, and the weather favorable for the purpose, the whole is repacked in much longer piles, and heavily weighted. A little olive oil, or hog's lard, melted, used in the handling adds much to its appearance. The tobacco is taken from this pile and sold loose; or, if it is intended to be kept on hand or prized in shipping order, it remains in the pack until the last of March or first of April, and is then rehung and dried out by having small fires under it, if the weather should not be favorable for the purpose. If it is permitted to get soft it loses all the benefit of having been repacked. After it is entirely dry, on some balmy day thereafter it can be taken down and repacked, and heavily weighted, ready for prizing, or to remain on hand safely for any length of time.

The increase in the consumption of tobacco keeps pace, if it does not go beyond its production; so we need not be afraid of making too much—provided, it is of the best quality. Its use has become universal; whether for good or for evil, let those who use it answer. Men of the highest standing in morality and religion, and of unbounded influence, favor and practice its use. Princely fortunes are made by very many who engage in its traffic, while the planter gets very poorly paid for the large amount of dirty toil he undergoes in its cultivation, not one of whom coming under the writer's observation ever made a fortune by its cultivation. In order to get the best paid for his labor, let every farmer improve the quality of his tobacco, and let buyers discriminate more in prices between a good and an inferior article, and then the Richmond tobacco market will be just what it ought to be—the best in the world.

Chesterfield county, October 4th, 1875.

W. W. H.

[For the Southern Planter and Farmer.]

SHEEP HUSBANDRY.

The English date their improvement in agriculture from the time of their attention to sheep raising; but they had mutton-sheep only, whose droppings are like calves'. They raise immense crops of turnips for their food in winter. And it is this class of sheep my experience is in. Your correspondents seem to consider the value of the wool alone. I consider the carcass the profit; wool pays for the keep—the more the attention and feed, the better the remuneration in both.

You think our farmers are disposed to raise sheep. I have always noticed beginners have strong tendencies to extremes; some think they need no feeding—anything will do them; “they will eat the running brier by the yard.” All this is a mistake. They require less than other animals, and they will nibble the tender end of briars; and if the brier was removed frequently, doubtless they would eat the tender shoots as they put out; but this they would do as an alternative, as you see cattle sometimes leave luxurious grass to eat old, dry straw. Another erroneous idea—“sheep will bear crowding.” Crowd sheep on the farm and they will skin it into poverty; not one will ever be fit for the butcher or the table; none will sell; consequently it will embarrass the owner to know what to do with them. He will have to adopt the plan I heard of: as winter approaches chase them, all he can catch cut their throats for the felt, as too weak to encounter the winter; and thus end in failure, loss, disgust, abandonment.

Advise farmers entering into sheep husbandry to begin only with as many as they can furnish grass enough for in the summer and a moderate supply of food in the winter, a fair proportion of which should be of turnips or other roots, or cabbage leaves—especially for ewes; beans promote the growth of wool. Increase the number as the means of keeping increases, always bearing in mind sheep of any kind will always do better in small than large flocks.

I have now complied with your request in a very plain way, and short; the latter you editors prefer.

Clarke county, Va.

J. W. WARE.

[For the Southern Planter and Farmer.]

NOTES AND ITEMS, No. 2.

In speaking of peas, in the October No. of the *Planter*, I remarked that I was growing the black and another variety called the shinney. My attention was first called to this pea years ago, when farming in another State, by reading the essay of Mr. Ruffin, referred to in the last number, and I then tried, unsuccessfully, to obtain a supply of seed. I have this year grown some two acres of this variety, and am very well pleased with it; indeed, for the purposes to which I put the pea, I prefer it vastly, as far as one year's

experience can go, to the black, or, indeed, any pea I have ever grown. Mr. Ruffin's description of this pea is so accurate, and his estimate so just, that I cannot do better than to quote his exact words. He says:

The mottled or shinney pea, which has been so much celebrated in latter years, differs in some respects from all others. The seeds are of a light brownish color, thickly streaked or mottled with deeper brown. It is deemed by farmers who have tried it longer and more fully than myself, to be one of the heaviest vine-bearers, and also by far the most productive in grain. Mr. Robert Chisholm, of Beaufort, S. C., in 1850, first brought this pea into general notice. This gentleman, whose intelligence and observation deserve all respect, made careful comparisons, both by observation and by weighings of this with other then most valued kinds of pea, and reported of them as follows, in the *American Farmer*, of May, 1851: From the few seeds first obtained and planted in the spring, he gathered the earliest ripe seeds, and sowed them again in July, along with the "cow pea" (or buff?), obtained from four different localities, a red pea (called there the "Chickasaw") said to be very productive, and also another favorite early pea. The products of seeds were not measured; but, to the eye, there was no doubt as to the superior production of the shinney pea. Subsequently, for accurate experiment and comparison, Mr. Chisholm had gathered separately and weighed the pods (dry) as gathered, from measured spaces of three kinds, and found them as follows:

A quarter acre of a favorite kind of red pea yielded of pods..	280 lbs
do. do. of "cow peas" (query, buff?)	82 "
An acre of Shinney peas, alongside of the cow peas, lbs.	1288
or to the quarter acre,	322 "

It is probable that the much greater weight of the pods of the shinney pea was in some measure increased by the greater thickness of the covering hulls of this variety. Still, there must have been also an important increase of the grain alone.

This mottled or shinney pea I saw in Pendleton, South Carolina, in 1843, and heard it recommended as a valuable kind by different farmers. One of them was the Hon. John C. Calhoun, who gave me a supply of seed. After some years trial and of comparison by the eye of this with various other kinds, I abandoned the mottled pea, for some of its peculiarities which recommended it to other persons. These were—1st. the long time of successive ripening of the pods, requiring different times of gathering, and slow work. 2d. The difficulty of beating out the seed from the hard, tough and closely joined hulls. But neither these nor any other objections counterbalance the greater productiveness of the mottled pea—which quality I did not test by measurement, and therefore did not suspect.

It was also noted, as a peculiar value found in the mottled pea, that the vines were pulled up, still green and full of leaves, after most of the pods were ripe, and were thus cured for hay.

This last peculiarity noticed by Mr. Ruffin is one that recommends it very highly to me. To-day, after three light frosts, the black pea vines are entirely denuded of leaves, and the stalk apparently dried, while the shinney is full of perfectly ripe peas and green, luxuriant leaves, and the stem still green and succulent. I have used an acre or two of peas for feeding my horses and milch cows in the stable, and find them superior to the best clover, with oats as grain feed; while with the pea no grain is required. The peas cut for this purpose were the black, and the ground being in good heart, they ran and intertwined so thickly as to render mowing a difficult task. The shinney pea grows more upright, with very little disposition to run, and I think, without having a great deal of experience, will be far preferable as a crop for feeding green on this account.

Another advantage that it possesses for this purpose is that the peas, when fully ripe, are very difficult to shell out; while the black pea, if ripe, will, if cut, after being exposed to the sun until dry, shatter out very badly. With my limited experience, it would, perhaps, be presumptuous in me to express a positive opinion of the merits of the pea as a forage crop. But as I have been practising soiling to a greater or less extent for ten years, and during that time have tried almost everything that has ever been used for the purpose, I feel at least that I may say what my own practice for the future shall be, unless my experience is different in the future from what it has been in the past. I shall hereafter devote at least one half of the land hitherto devoted to rye, oats and sowed corn for soiling to the growing of peas for that purpose, as I am satisfied that more and better food can be raised in this way, and at less detriment to the land. Indeed, I am inclined to think that, as in the case of clover, the entire crop grown may be removed from the soil, and the roots will improve the land. I have somewhat modified my views about the best method of planting peas. Until this year, I have been very much in favor of drilling them in, in rows two feet apart, and running the coulter between the rows. I believe now, for the general crop, I prefer broadcasting. My reasons are that you get more vine and vastly more roots by broadcasting than by drilling, and that the latter are thoroughly distributed through the entire soil. One and a quarter bushels of the shinney pea or one and three quarters of the black is about the right quantity for an acre.

Two years ago I bought a peck of small, round, white pea, called by the grocer of whom I bought them the *Gallivant*. These were sown broadcast about the middle of July on a piece of very poor, sandy land, and superphosphate at the rate of 200 pounds per acre sown with them, and the whole harrowed in together. The peas came up finely, and made a splendid growth, and by the last of September, when they were turned under to prepare land for strawberries, they stood about two feet high, very thick, and full of peas, only a few of which were ripe. This pea I found was a bush variety, and ran very little, if any. I speak of it now because I think it would be an excellent thing to sow in corn at the last plow-

ing, as it would give a very fine growth before frost, and not interfere in any way with the pulling of fodder or cutting up the corn. The seed being very small, a bushel, or even less, would be sufficient to seed an acre. Buckwheat may be sown the same way, and gives a very good crop on good land without any apparent injury to the corn crop. As a means of putting all the stock on the farm in splendid condition in the fall at a very small expense, I consider these two crops, grown in this way, invaluable. Hogs turned into a corn field where the peas are plenty will scarcely ever touch the corn, and nothing will put them forward faster. My observations in the gathering of the crop of peas this fall has convinced me that superphosphate will pay when applied to this crop. Next year I shall use 100 pounds per acre on all my peas, and 200 pounds on some as an experiment—being fully convinced that it will pay in the long run better than upon any other crop I can apply it to.

About plowing in peas, I find myself compelled to differ from most persons, though Mr. Ruffin seems inclined to the same opinion with myself. I do not think that the crop should be plowed in when green and succulent, but that it is best to wait until it has fully matured, and has shrunk very much in bulk. Indeed, I do not know but that it may be plowed in with equal advantage at any time during the winter. The leaves of peas are very soft, and decay rapidly, and when they fall upon the ground they appear to cling to it, and are scarcely ever blown away. Many of those of this season's growth that fell from the vines two or three weeks ago, are now nearly entirely decayed, and stick to the soil as if they were glued there, and the soil all through the field is dark with them.

FEEDING HOGS.

The most common practice, both in Virginia and Northward, is to put hogs to fatten in a small, dry pen, and then feed them the most concentrated food. This I cannot think is the best method, and repeated experiment has proven to me that it is not the most economical.

Hogs should be put to fatten when they come off the stubble fields, that they may not lose the impetus of growth and improvement they have acquired in gleaning the fields. I have found a small field of rye sown for the purpose excellent to give hogs a start, as it sheds them off nicely, and starts them to growing finely. When taken off of rye, they should be put on clover, and fed corn moderately until green corn is a little past the proper condition for roasting years. The corn should then be cut up and fed to them stalk and all as long as the stalk is green, after which it should be shucked and given to them in the field. I know that many will say that the hogs will run all the fat off of them if allowed so much range; but a hog that has enough to eat will not travel any more than just enough to obtain clover and grass sufficient to preserve his health. Of course, if any one has a pea field, that will answer very well in the place both of clover and corn, though I prefer feeding corn an

the time. Pumpkins are an excellent substitute for grass, and turnips will answer, though not so well. Hogs should at all times, and especially when fattening, have a supply of charcoal by them. It is astonishing how much they will eat. Every one has observed that hogs that are fall fed on corn and closely confined will lie and pant, even in cold weather. This is caused by the heating effects of the corn, and arises from a feeling really similar to the *heart burn* in the human subject. The free use of charcoal neutralizes all acids in the stomach, and hogs that have it to go to at all times will never suffer in this way. It is much more economical to fatten hogs in warm than in cold weather, and they will then consume much in the way of green food that the frost will destroy. All things considered, I think a hundred pounds of meat can be made in August, September and October for about one half what it costs to make it in November, December or January. CHESTER.

[For the Southern Planter and Farmer.]

WARNING TO VIRGINIA FARMERS.

What has caused the ruin of many nations once powerful and prosperous? History proves that in most cases it was the deterioration and devastation of the soil; and no nations have ever maintained themselves that did not preserve the elements of its existence, and that of their increase; and all countries where the soil did not get back from the hands of man the elements essential for the return of good yields, have fallen into desolation and sterility.

The belief with which many people comfort themselves, that the land in Greece, Ireland, Spain, and Italy, which once yielded large crops, can ever again be made permanently productive, is completely idle and vain. The emigration from Ireland will therefore last another century, and the population of Spain and Greece can never exceed a certain very narrow limit. Ever since this country was first settled its inhabitants have carried on the most rapacious system of farming, and the present generation is aware that it must suffer for the sins of its ancestors. The first settlers raised crops after crops on the virgin soil until the yield declined, when the larger number of them moved farther west, looking for another chance to repeat their destructive operation, while those who remained behind have been, and are trying now, to worry out of the soil as much as they possibly can, instead of economizing and returning what they have taken out of it.

The only efficient remedy against that chronic disease is MANURE. No system of farming is remunerative for any length of time without manure. Thorough and clean cultivation of the soil, a judicious rotation of crops, with the use of clover and grass, may delay the deterioration of the soil, but not prevent it. The time is bound to come when the land will be too poor to produce clover and grass. Commercial fertilizers, plaster, lime, &c., are in many cases very useful for assisting the effects of manure, but not more. The appli-

cation of this remedy is the more difficult as the patient does not comprehend his condition. The farmers are like a consumptive, whose looking-glass shows him, in his imagination, a picture of healthfulness, who even interprets favorably the most appalling symptoms of the disease and his most severe sufferings, complaining only of a little tiredness. So the farmer is complaining only of a little tiredness of his land—there is nothing else the matter with it. The consumptive thinks that a toddy would restore his strength, but the physician does not allow it, because it furthers the development of the disease. In the same way the farmer thinks that a little guano would help his land, while with the use of it he is only hastening its complete exhaustion.

It takes years before an insolvent, bad manager declares himself bankrupt. He does not give up the delusive hope of rescue before he has ruined his relations and friends, and before his last silver spoon is put in pawn. Likewise the descent of nations to the condition of poverty and desolation is a slow process of self-destruction, which can last many hundred years before people are aware of the disastrous consequences of their portentous system of farming, when they generally try to help with improvements, each of which is a memorial of the exhaustion of the soil.

The fact that nearly every farmer considers his system of farming to be the best, and that his land will never cease to yield, has caused the most complete carelessness and indifference about the future, as far as it is dependent on agriculture. So it was with all nations which have caused their ruin by their own doings, and no political wisdom will save this country from that fate if the people do not give the proper attention to the signs of the impoverishment of the soil, and to the earnest warnings and teachings of history and science. The land in Virginia is not so far exhausted yet that the present yield of crops could not, in the course of a few years, be doubled, with the help of those materials which have heretofore been improperly wasted. Would that not furnish a basis to settle the question of the public debt upon?—a question about which many ineffectual plans have been proposed. The owners of land are the only class in Virginia who can pay the public debt, and if they do not their full share toward redeeming the honor of the State, the debt might just as well be repudiated at once.

Nelson county, Va.

LOUIS OTT.

[NOTE BY THE EDITOR.—Such warnings must not only be sounded, but acted upon. The Hon. GEORGE P. MARSH has done in America a special service in this direction. His work, "*The Earth as Modified by Human Action*," shows us the manner in which man has treated his inheritance, and that, from the beginning, he has been the "lord of creation," with a vengeance. This book is made to last; and no thinking man, especially in agriculture, can have by him a companion who will prove more suggestive, or enable him better to regulate his conduct as a part of the complex machinery the Almighty has set in motion on the earth.]

[For the Southern Planter and Farmer.]

THE PROPER ECONOMY IN THE TREATMENT AND APPLICATION OF MANURES

Is one of the most importance in the practice of agriculture; but the main object of the farmer generally, seems to be to get his manure out of the way and give employment to the man and team when there is nothing else to do; therefore he employs leisure time, no matter when, to draw out and spread the manure; no matter in what condition the land or the manure, he gets it out of the way, and trusts Providence for some further benefit. Suppose our capitalists should invest their capital in that way, they would soon be as poor as our farmers are. How should they do?

They should make a depression in the barn yard, large enough to hold all the wash of the manure heap, and pave it with cobble stone or concrete and cover it with a coat of water, lime and mortar, well laid on, so as to make it water-tight. Place the manure where the drainage will all be deposited in this tank, let the winter rains leach it—the more the better. If there should not be rain enough, it will pay to procure water in some other way, as water is the best absorbent of all soluble food for plants, and must be the medium through which all nourishments reach their roots, therefore the sooner barn yard manure is made into a solution, the more will be preserved for application directly to the growing plants, which is the most economical way to apply all soluble manures.

As soon as the cattle are turned out of the yard in the spring the manure should be sheltered from the sun, but not from the rain. A slight covering of earth with straw over it; if straw be too valuable, weeds or worthless litter, such as “woods trash,” or pine chips from the wood shed, or brush will do as well.

All the winter manure that has been well leached, should be made into hot-beds to start, and also to grow early vegetables in, if there be more than is wanted for starting.

Hot-beds may remain the second year as cold frames, with an additional covering of fresh earth to advantage, which is an economical way of composting long manure that has been leached; the earth covering will arrest the escaping gases while it is being transformed into humus, the most valuable of insoluble manures, it being capable of re-absorbing as much food for plants as has been set free in the process of its own formation, and giving it out to their roots on their application.

All soils, whether cultivated or not, are more or less active at all times in collecting and setting free their fertilizing qualities, received from the winds and rains and other sources. The soil that contains the best proportion of humus, will retain the most of the passing plant food, until their roots call for it; but it is best that all soluble manures should be retained in their solution, until the seed to be nourished by it is planted, as it is all ready to be utilized by the plant. It is also ready to be set free by the soil in its continued ac-

tion, and pass off in gas and water unless arrested by the roots of plants, therefore all soluble manures should be applied in a state of solution to growing crops, as the most economical in every respect. The insoluble part should be composted or made into hot-beds and used for two or three years as cold frames, well covered with earth until it has been converted into humus, or it may be plowed deep into the soil, if not too dry, and there left until transformed into humus by the soil.

D. S. HOWARD.

Chesterfield county, Va.

[For the Southern Planter and Farmer.]

ORCHARDS.

Is it not a shame that Virginia—one of the best States in the Union for fruit-raising—should allow thousands of barrels of apples, pears and other fruits of all kinds to be shipped from the North, and even from California to Richmond? Fruit-raising is undoubtedly the most profitable as well as pleasing and agreeable crop that can be raised on a farm. If I have been rightly informed, the editor of the *Country Gentleman* states that every acre of bearing orchard is worth a thousand dollars, and will pay an interest on the same. I do not think \$100 a year so large a sum to clear off of an acre of bearing orchards, and it is very common for a careful fruit-grower to clear \$500 from a single acre. Now, if the fruit business pays so well, and is such a pleasant business to engage in, why do not more farmers in Virginia engage in it? The only answer I can find to this question is the want of money to start with.

Now, I have a plan by which every farmer owning a farm capable of supporting his family, can get money enough to buy his trees, take care of them and in from 5 to 10 years have an orchard one-half as large as his farm. Let us suppose me, A, owns a farm of 200 acres. Mr. A's first step is to sell one-half his farm, which we will suppose he gets \$40 an acre for, or \$4,000. Now it takes \$10 an acre, or \$1,000, to buy the trees and plant the remaining 100 acres. He has now left \$3,000 which he will put out at interest at 10 per cent., and let him so draw on the amount that at the end of 10 years (when all his trees are paying) he will use up the interest and principal. This amount with what he can make off of the remaining half of his farm will enable him to live easier in the ten years than he could possibly have done otherwise: and now how will we find him at the end of the ten years? He has only 100 acres instead of 200; but his 100 acres are worth, according to the editor of the *Country Gentleman*, \$100,000 if properly managed, while had he kept his 200 acres the whole farm would probably not be worth \$10,000. It would require some *nerve* to do this, but it is a sure thing if the details are properly carried out.

A business man would not hesitate a minute in such a case, neither should a farmer. Do not wait until your neighbor has succeeded; it will then be too late. "Faint heart never won fair lady."

W. F. TALLANT.

PUBLIC SPIRIT.

[This Address was delivered the 23d of June last, at Randolph Macon College, by JOHN HAMPDEN CHAMBERLAYNE, Esq., and we ask for it the diligent examination of every reader of the *Planter and Farmer*.]

When one who is neither thinker nor orator, neither famous nor learned, is asked to aid in such a celebration as yours, he may well be doubtful both to choose what he shall say and how he shall say it. He has been in the rough work of life, you in the quiet school. He has been proving, limiting, enlarging and not seldom forgetting the rules and the theories you have been learning and discussing. He must allow for a thousand disturbing forces, your study has been of principles, simple because abstract. He has dealt with men and things, you with pure ideas. If he would amuse you and only amuse, you would hold him forgetful of your dignity. Yet, if he should try to enforce or to add to the lessons you have here learned of able teachers in pure science or the arts which use it, in logic or its rhetoric clothing, in the genius of your mother tongue or the literature which is its fruit, then you might justly smile at his presumption.

In such a difficulty, he must trust to your good will, and hope the few thoughts he lays before you may atone by their honesty for their lack of brilliancy or of polish.

And yet, after all is said, the lessons we learn in youth are not all that manhood knows; the drill-ground still fails to teach something that the battle needs; and so, without presumption, I may, perhaps, ask your attention to subjects doubtless outside your curriculum, yet, doubtless, worthy of your care.

From the school, call it University, Seminary, College or Academy, we go forth, some to the pulpit, some to trade, some to the desk, some to the field or mine, some to the forum, seen of men, and some to the humbler labor of the hand at plow, or loom, or anvil. Yet, in a sense, we are all one, for whatever else we be, we are still citizens, and I venture to ask you for a moment to consider that large part of your civic duty which is roughly summed up in the term Public Spirit.

Do not think this term forebodes a lecture on politics, or that I shall so much as name the name of a party. Far higher than party and politics lives this spirit, far deeper lies its strength than laws and statutes, far wider its province than Legislatures and Congresses. From it all these things are sprung. By its growth you shall measure the march of man from his primeval cave to his free city, for by its force was bridged the gulf between the lonely savage, shivering and hungry, and civilized man, master of the earth and wielding the powers of nature.

This great principle has shown itself independent not only of codes, but of climates and religions. It has flourished under despotisms and decayed in republics; it has ennobled Pagans and it has by times refused to adorn theocracies; it has lived though oppressed by evil laws, and it has all but died where each man was

free to do what was right in his own eyes. Its splendor made famous the petty states of Greece, the little republics of Italy, and the Arab Empire in Spain; its death foreboded the downfall of Rome, and its absence left the huge powers of Asia a prey to the first comer. Poland fell because she lacked it, the Irish Kelt with all his virtues has been a slave for the want of it, and its force made the Northman the founder of the modern world, and carved out for him kingdoms wherever he set his foot, from the shore of the narrow seas to the beauties of Sicily and the desert of Judea.

Let us not think then that freedom or formal belief, climate or fertile soil, pride of birth or glorious memories can give us Public Spirit, and, beyond all, let us not set down content that we have it and satisfied with our own virtue, a virtue that will never preserve us, if it live only in our infancy.

To define Public Spirit would be hard, and is happily needless. We all know it to mean, in general terms, a devotion to the public, the common good, an active desire to advance in all directions the progress of the society we belong to, the State whereof we are members. It is not hostile but complimentary to individuality of character, and it waxes great where, as in England, individual force is everywhere apparent, in thought and art, in theology or in trade, or even in manners or dress, just as it wanes and dwindles where some absorbing tyrant, some Augustus or Torquemada or Napoleon impresses one shape on all men, and where as once in Scotland the Kirk, and always in China, ancient prescription moulds in one mould the minds of generations.

Needless to say that the first requisite to Public Spirit is knowledge, knowledge general and knowledge special. To touch on the general knowledge needed is beyond my province, as also that branch of the special knowledge by which you follow our race in other lands, to see how our literature grew, and in what forms our thought is embalmed. But there is a special knowledge more special yet than this, and which is perhaps of necessity left out of the studies through which our schools conduct you, and I ask you to look with me into the past of our Commonwealth of Virginia to learn from her story how, with the strength of her public spirit, her power and fame both rose and fell, and to inquire why once and again that spirit grew and flourished, yet in one long period sickened and pined away.

Virginia passed through a peculiar development, and one little acted on from without. She was settled for the most part by races of strong individuality, English in the low lands: Scotch-Irish and Dutch in the valley, and French Huguenots grouped here and there on her tidal streams. Lovers of the field and farm rather than of the counting-house or the factory, her people found themselves holding a territory complete in itself, and furnished with frequent rivers which so met everywhere the needs of their trade as to forbid its concentration. Thus they lacked the bonds of cohesion which cities give, and living in rude abundance they repro-

duced here much such a society as that which in England Fielding drew and Walpole corrupted. Among them, therefore, we should look to find much strength of individual character, with loose social ties and little public spirit. But one element is yet to count. This Virginia of colonial days was essentially an aristocracy. Without going into the vexed questions whether the first colonists were gentry or convicts, whether our historic names were brought to us by debauched spendthrifts and transported felons, or by cadets worthy to fight by John Smith's side and to sail with Walter Raleigh, we must still agree that the Old Dominion was ruled by a landed aristocracy. Now, aristocracies, so their base be wide enough, are favorable to the growth of public spirit. This aristocracy was widely rooted in the respect of the people, was trained in the learning of Europe and cherished here at Williamsburg, the pursuit of knowledge, adding to public grants such private gifts as made of William and Mary the greatest and the richest foundation of learning in the New World. It was forced, too, to master by wise counsel, as well as active work, the ruggedness of nature, the craft of the Indian, and the prowess of the Frenchman.

At all events, when the colonies had outgrown their bands and the war of Independence gave birth to a new people, in Virginia of all the colonies we find the most public spirit. Not, mark you, the quickest flare of revolt, not the noisiest clamor of passion, but that deliberate conviction of duty, that steady devotion to the common purpose, that power of organization, that trust each man gave his neighbor, that persistence under failure, and that firm confidence in the event which, together, make of mobs armies, of rebellions revolutions, and of scattered provinces a great people.

That whole period from the debate at the Burgesses House to the decision at Yorktown, from the provincial declaration of the Apollo Hall in Raleigh Tavern to the treaty of '83, was instinct with public spirit. In Washington stripping his own Virginia of means and men to seek the common good at Boston and New York. In Henry, straining every nerve as Virginia's Governor, to hold up the hands of Washington. In Nelson, devoting his house to the guns of his countrymen, and giving his estate to the public purse; in that Roman matron who bade her sons come back no more to their Valley home, if on their heels Tarleton should ride; in Henry Lee of the Legion, never losing trust in the great plan and the greater genius of his commander, and with his little troop covering the long, long retreat from middle Georgia to Dan river, to become, at length, part of that great leaguer to which gathered at Yorktown, Lafayette from the Valley, Washington from Long Island, and Rochambeau from the Windward Isles.

These things are an oft told tale, and when war was done and peace came with tasks yet harder, when destruction ended and construction began, when the pullers down were called to be builders up, that same public spirit lived to ends yet greater and on a scale far wider. Then Virginia created the Union despite the loss to her

which prophetic Henry saw, then Washington gave eight years of his mature wisdom to his country, and then, likewise, with self-denial almost above the human, laid down a power well nigh absolute and wisely, as few of the sons of men are wise, warned his countrymen to limit his great office, whether worthily held by statesman or patriot, or, as might be, in other days, made the prize of intrigue or the spoil of some lucky captain. Then Virginia ceded the boundless Northwest, and then she consented to make herself in the Senate small as Rhode Island. Then at one blow she abolished entail, primogeniture and the privileged church. Then Madison taught all the country through the *Federalist*, Marshall laid the foundations of our jurisprudence, and John Taylor, of Caroline, raised the empirics of the farm to the science of agriculture. On every hand, from 1775 to 1825, we find Virginia full of vigor at home, respected and powerful abroad, because full of public spirit.

With further instances I will not weary you, the rather as we easily remember what we take pride in and because I have a sadder task, but I hope more useful. With the year 1825 the heroic period of Virginia may be said to end, and a decadence followed which we are apt enough to forget, but which to study is our highest duty, since the lessons it teaches are needful—yesterday, to-day and to-morrow—if our decadence is to be followed by steady and long-continued progress in strength and power.

The decline of Virginia's power is generally acknowledged, but you will often hear men say it was comparative only and not positive, and that whatever its extent it was due to the democratic element of our institutions and sprang from universal suffrage, for, be it known to you, there still lives among us a class of minds to which Democracy is as the red flag to the bull, and whose religion it is to pronounce the ballot-box anathema maranatha.

Now, I am here to preach no politics, but, as observers of affairs and students of history we can see this view is false. The decadence could not be caused by universal suffrage, because the suffrage was not extended till long after the decay was plain. It could not be caused by democracy, because no such effect followed the establishment of extreme democracy and the widest limit of suffrage, both before in New England, and afterwards in the new commonwealths of the West. Moreover, to take a wider view, public spirit, and with it the most splendid prosperity, has been seen in countries the most democratic, in the best days of Athens, in Rome when at length the plebeians had seized a full share of power, in the Free Cities flourishing by their democracy amidst robber barons and petty kings. Public spirit, and with it prosperity, blessed the cantons of the Swiss amidst their snows, and grew, thriving and indestructible, in the Hollow Land, guiding and shielding the raging Democracy of those Beggars of the Sea, true Sons of Civilis and of Herman, who held their free rights against Alva and Torquemada and all the wrath and power of the Empire which girdled the world with the same constancy wherewith their race conquered and still holds their teeming soil from the hungry waves of the Northern Ocean.

Leaving these narrow notions, all too straight to fit the facts, let us see when and why this decadence of Virginia took place.

I venture to date its beginning in the year 1825, and to call it absolute. If relative, then it depended on the progress of her neighbors, but we know their progress was not yet begun. The great West was still all but a wilderness, and not yet the granary at once and the market of New York and Boston, Philadelphia and Baltimore. The Appalachians still barred the way from East to West, and the single point where nature leveled them had not yet been seized by the genius of Clinton.

The Erie Canal was opened to traffic only in 1827, and only then New York began to be a city. The Baltimore and Ohio Railroad was only begun in 1827, and in 1830 Baltimore was still a straggling village. The Pennsylvania Central was hardly a project, and the Hudson and Erie Roads not even dreams. The coal of Pennsylvania had not been opened, and the cotton of the South was yet but insignificant, the whole product being, in 1825, but 720,000 bales, not enough either to invite the people of Virginia to its culture in the South or to furnish to New England those mines of wealth, the factories of Lowell and Falls River and Lawrence.

Till 1815 Virginia led all the States in power and in influence; from '15 to '25 she stood still, and then for long years she grew weak from day to day.

The race of The Fathers was dead or dying. Washington, first in death as in life, had departed in 1779; Jefferson had yet one year of labor for us; Madison still held at Montpelier assemblies whither came the eminent of all lands to hear the oracles of experience, and Marshall still adorned the bench. But The Heroes neared their natural limit and none followed to take their place. With Monroe ended the era of Virginia Presidents, if we except, as we must, the accident of Harrison and the blunder of Taylor. To Madison was to succeed Tyler, to Washington, Wingfield Scott.

The interval is long, but not longer than the step from the fruitful period to the barren.

What labor prodigious and what noble aims made splendid that fruitful time! Marshall, creating a system of law, yet found time to give us his life of Washington. Taylor's great estates and his profound inquiries into agriculture, gave employment for a life, yet his work, *Construction Construed*, opposed to the sentiment of the time and defaced with every crabbedness of style, is yet a monument of thought. Henry Lee's leisure produced his "*Memoirs*," an essay of military history, solid as Thucydides, glowing as Napoleon, and to-day the only fit record of the transcendent powers of the greatest soldier of English blood. Look where you will, devoted labor and lofty thought is seen. Washington founded the college which long bore and still should bear his name alone; he attacked the Dismal Swamp and projected water ways through it which should make a Virginian city the port of North Carolina, a work but within the last decade completed; Washington, again,

gave his mighty aid to the great design of drawing together the waters of the Chesapeake and Ohio, and thus, whilst Clinton was still a school-boy, a Virginian surveyed the route and made the plans for two highways of commerce between the seaboard and that vast basin, which, then a wilderness, he saw would be the home of empire and the hive of men. Madison, too, bent his great mind to drafting laws that should create on the Virginian shores of Chesapeake, the city of the mid-Atlantic, the city which, through the apathy of deadened Virginia, is now found on Patapsco's narrow banks. And lastly, consider Jefferson, not content with the part he played in the Revolution, in the chair of Virginia's government, in the embassy to France, and eight years in the White House, Jefferson who introduced both the tomato and the rice plant, and found time to invent a plow; Jefferson, whose Declaration made an epoch in the history of man, and whose Notes on Virginia even yet stand alone; consider Jefferson, hoarding the golden sand of his last years, and, careless of his fortune, leaving his children and his memory to his country, completing, ere he died, and starting in its noble work the University of Virginia, his last, and mayhap, if he had lived to guide it, his best gift to his kind.

Such the Heroic age, the days of action and of thought to noble ends. Swift came after it the time of torpor and almost death. To paint it, I fear, will seem exaggeration. But, in truth, to exaggerate it is hard.

In all directions we took the downward path or sat still and weak. Virginia had given birth to the Constitution; she had overthrown the false reading Adams made of it; she had furnished presidents for eight out of nine terms, and directed the policy of the country at home and abroad. Now she was to suffer Van Buren and to be betrayed by the reaction that thrust Harrison forward.

Nor is this date of 1825 chosen arbitrarily or because then John Quincy Adams entered the White House. In history, literature, and law, as well as politics, the age of production was gone; that of compilation and of commentary had come. The notes on Virginia, the *Federalist*, and the series of Supreme Court decisions belong to the first period. To the second, mere compilations and commentaries like Rives' and Tucker's, and a mass of pleas for slavery, whose very names are already half forgot.

Turning from these provinces of thought to those material things this age at once prizes and affects to condemn, we find no progress. In the long period from 1825 to 1855 Virginia made no discovery of physical facts, set on foot no new industries, her old mines were abandoned, new ones remained unopened, her railroads crept painfully ten miles a year. The canal, losing its first impulse, fell back on State aid, languished and stood still, a costly failure. Lines of rail to the West were vaguely projected, and meaning little effected nothing but to punish individual inertness by the creation of a burdensome public debt. One line, diverted from its true course by every accident or whim, halted ten years at the Blue Ridge and

gave up the ghost at Mill Mountain, leaving on miles of hills and valley the skeleton of a work never inspired by faith and purpose; the other line on the south of the James dragged tediously its scattered links and abandoned quite the plan of the few who founded it and reckoned without their host in counting on a Public Spirit no longer awake. Thus, on the one side was left Northern Virginia and the lower Valley and the wealth of farthest Potomac to be severed from the State and gathered by the grasp of Baltimore; and thus on the other the riches of the Southwest, and the products of Tennessee and North Georgia and Kentucky, were left to find what market they might, and to beat in vain on the walls of nature's making, which in other States man was piercing, but which the sloth of Virginia suffered to hem her in.

Whilst Pennsylvania explored her coal and iron, Virginia let a wilderness still stretch pathless between the ores of cis-Alleghany and the coals of Kanawha. Still the harbor of Elizabeth vainly offered her roadstead, fit for the navies of the world, and vainly still ran down by the hills of Richmond an infinite power. Agriculture alone made a show of prosperity, and that only on the fertile banks of our rivers, on the grassy hills of Piedmont, and among the thrifty dwellers of the Valley. Elsewhere waste was the rule and want the consequence; the white population of many counties absolutely decreased, and deer and beaver thrived undisturbed where once Carters and Byrds, Blands and Spottswoods and Berkeleys had discharged the duties of the citizen and adorned the pleasures of the host. Here and there one still remained, like Edmund Ruffin the farmer, like Joseph Cabell the canal builder, like Fontaine or Tunstall, faithful to their ideas. The iron and the flouring mills of Richmond, still in time of dearth, showed how plenty might be had. Here and there a forge was still fitfully hot, and from the hills of Charlottesville and Lexington and the ancient city of Williamsburg the light of culture still feebly shone, but seemed to shine in vain.

Public spirit, in truth, was all but dead. No museums were established, no libraries endowed, no schools founded. The outer world we left to itself, or appeared at Washington to talk of a power gone from us. Our Legislature grew to be a scene of small intrigue, where the common good was forgotten and log-rolling replaced patriotism. New York debated, extended, and completed her Erie canal; Baltimore devised her road to the lakes; while Virginia legislators swore and sweated and scrambled over a mud pike from Poverty Hill to Scuffletown.

Culture itself minished and dwindled. The University was soon willing to lose the great names that Jefferson had called to her aid, yielded to the public sentiment that distrusted free thought, and preferred men safe to keep the beaten track; and having once had Bonnycastle, Long, and Key, boasted now, and with justice, of her Harrison and her Rogers, but, in spite of their genius and labors, followed more and more, as years went on, a science that never in-

quired except of books, a philosophy of vague eclecticism, and a system of teaching where the spirit of thought gave place to the spirit of "crank."

The ancient foundation of William and Mary, despoiled by the Revolution of all her wealth, yet long maintained her strength of spirit and love of culture. In 1779 Jefferson became one of her governing board, and made large changes in her system to fit the new needs of a new time. Washington was her chancellor from '88 to the year of his death. The college still remained till 1810 the official guardian of State surveys, and under Bishop Madison and Dr. John Augustine Smith her teaching kept abreast of the knowledge of the world, and trained almost all the generation of Virginia's lesser heroes—Tylers, Roones, Gileses, Leighs, Lomaxes, and Baldwins.

In 1826, Dr. Smith was tempted, as so many other Virginians, to leave Virginia, and losing his great powers and extended knowledge, William and Mary struggled henceforth with varied fortune, until after the death of President Dew in 1846, she sank, as her chronicler tells us, to a "hopeless condition," and sought, in the hope of sectarian patronage, the fatal alliance of sectarian zeal.

The Institute, always useful in its sphere, yet found its highest aspiration during this period in following the United States Military Academy as Peter followed the Lord.

Of other schools, properly speaking, there were none. The sectarian spirit did, indeed, design a few, but the sectarian spirit stifled them, and Virginia was left either to the itinerant ignoramus from New England or to the High Schools which had sprung up in the shadow of the University, and which walked humbly in her footsteps. Of literature and the scientific spirit there was an utter lack. In poetry we had Poe, abnormal and overrated as he is, and exotic to our country. Put him aside and you seek vainly for his fellow.

While Agassiz not only taught but discovered nature's laws, while Lowell and Bryant sang, while Irving and Bancroft, Prescott and Motley wrote, from that torpid generation of Virginians, sprang nothing that will remain. Our oratory became mere appeal, our logic a shriek or a threat; what should have been knowledge of the world became contempt of all beyond our sacred soil; braggart exaggeration usurped the place of history, and self-praise forbade self-examination.

Elsewhere, discoveries led to new generalizations and theories that agitated the world; we shut our ears to them. Elsewhere, skill and mechanic adjustment daily supplanted human muscle; with us, man and horse still essayed to rival steam, and crank, and lever. Elsewhere men looked to present need and future achievement; our study was of the past, our pride in our ancestors, and of our apathy and isolation we made a virtue.

Little wonder, then, that our population fled from us, seeking soils not more fertile, skies less genial than our own. Little wonder that to pierce the Blue Ridge we imported a Crozet, to climb it an

Ellett. Little wonder that we must ask New York for her Crawford to design the monument to Washington and find in Massachusetts the eulogist of his fame.

Then, indeed, we had to go abroad for all we needed from the dictionary of Noah Webster to the hoe of Oliver Ames. Legendre, and Davies, and Church, gave us all we had of pure mathematics; Anthon furnished what he called classics; the senilities of Goodrich, and the flimsy rhetoric of Abbott and of Headley served us for histories; thousands took Harper and Godey for literature, and there were those who worshipped, as poetry, the jingling commonplace of Longfellow.

But, not to weary you with instances, no man past his majority but knows that when the end came of the second period of our history it found our homes full of other men's work, our fields tilled by tools of other men's make, our crops carried in other men's ships, our schools taught by other men's books, our wealth gathered by other men's hands, our very pride founded on other men's lives.

The general fact is true as it is sad, and it is part of its sadness that it is hard to prove in detail. There is not, properly speaking, a history of Virginia, military, social and industrial. The facts must be painfully picked from reports of corporations, census tables and chance records, and, above all, they must be proved, and they are proved chiefly by negation. For in 1859, Virginia still had no State census, no geologic survey, no safe depository of records; her very boundaries were and are still uncertain, one being now in dispute, and another allowed to rest, only because the apathy of Tennessee rivals the apathy of Virginia.

This line of inquiry is not new to me, will not long, I hope, be new to you. With patience, and labor, and frankness that spared nothing, and spared, least of all, that false and ignoble vanity we often take for patriotism, I have laid before you the general condition of Virginia when the stock of John Brown's attack on Harper's Ferry ended that period and ushered in another.

The colors I have used are dark, the State I have pictured was weak. But, fellow countrymen, we come of strong blood, our race can withstand much from without and from within; it is a race which stumbles sometimes and falters often, but which has never yet utterly fallen.

Thirty odd years had weakened our strength, but not yet sapped our will. That period had rusted or softened our intellect, but our hearts were still strong, and when war came from without, the moral quality of our race sustained us, and in a moment awoke that public spirit which had seemed dead, but was only sleeping. The slothful became energetic, the luxurious hardy, the arrogant submitted to discipline, the selfish subdued self to the common good, and the four years began of sacrifice, devotion, endurance and achievement.

Of the victories and the marches in the field, of the patience and the self-denial in the homes, of the ragged valor in the ranks, and of the splendid genius of the leaders Virginia showed, I need not

tell you. Of them enough and more than enough, the truth and more than the truth, you are likely to hear all your lives long, at every cross-road, and by every household hearth. What concerns us is to see the condition which forty years had brought us when that war began, to explore the cause of that decadence, and to ask how we, of this time, shall march not down hill but up.

That condition I have shown you, truly, I believe. Its cause, we have seen, was not democracy, as some falsely say; neither was it, as others tell us, lack of energy. Energy we had, enough and to spare; an energy which overflowed across all our borders; an energy which Virginians showed in Tennessee and Mississippi, in Georgia and Alabama; an energy which made the Virginian respected in all the new States of the West, and by which, once rid of the trammels that bound him in his home, he subdued the South to cotton and won from the Indian the basin of Ohio and Tennessee. Carrying with them that energy, Virginians felled forests, broke prairies, founded commonwealths and ruled societies from the Alleghany to and beyond the Rocky Mountains. They swarmed out from their old hive and settled whole counties and states. In their new homes they were leaders of trade and of thought; they were bishops, soldiers and senators.

The traveller, go where he might,—to the mouth of Mississippi, to the fir-off plains of the Northwest, to Texan prairies or the golden valleys of the Pacific coast—still found Virginian names in honor, Virginia's sons in power. Her Breckinridges, Clays, Allens, Thurmans, Garlands, Taylors, Thorntons, Baldwins, Prestons, her Becks, Penns, Maynards, Starkes, and ten thousand beside, prove what energy and worth could still be born of her, and by some strange law must still fly from her soil. Emigration, seen already in 1825, had become in the years 1832 to 1850 a steady stream, which drained away our very life-blood, until it seemed we were to repeat the story of the Irish Kelt, who has for centuries showed in other lands a virtue stifled in its native home, and reaped in every kingdom of Europe the rewards denied to him in Ireland.

Neither Democracy, then, nor native sloth is the 'cause we seek, and, leaving the negative for the positive method, I should be false to you as well as to myself if I should shrink from declaring what seems to me the root of the evil.

It is to be found in the repression of free thought and free inquiry, which the institution of slavery thought necessary for its protection.

The leaders in the heroic period were to a man enemies to slavery and incredulous both of its expediency and its rightfulness, and it was they who offered the great free ordinance for the Northwest in 1784. Had natural causes met no hindrance, slavery would doubtless have been gradually abandoned. But the unwise war made on it at the North, begun by Aaron Burr as early as 1800, avowed in New England in 1804 and 1810, and pushed by John Quincy Adams with ever-increasing bitterness, forced Virginians to identify its protection with their right of self-government. "A poor thing," we

cried, with Touchstone, "but mine own," and shall I not do what I will with mine own? The abortive but frightful attempt of the negro Gabriel in 1800, and the Southampton insurrection in 1832, brought terror in to confuse reason, and turned prejudice to passion. Last came the demand for cotton, raising its price from 9 cents in 1830 to 17 cents in 1834, and the corresponding rise in the value of the negro, and a triple band tied us to slavery: first, the just and beneficent theory of State Rights and local self-government; second, the pride of race; and third, the greed of the pocket.

Determined thus to maintain slavery, we had next to justify it. This we did by clinging to one interpretation of the Bible; by triumphantly citing the example of the patriarchs, and by finding all doctrine in the famous case of Onesimus. On such texts as "servants obey your masters," a whole dogmatic theology grew up, fit rival for narrowness and intolerance to that which from such words as "The powers that be are ordained of God," taught the Jacobites of England the doctrine of Passive Obedience, or that, its antithesis, which the Independents and the fierce Fifth Monarchists invoked when they pulled down the prelates as "troublers of Israel," and smote off Charles' head with the "Sword of the Lord and of Gideon."

Slavery once bound up with the Bible and with fixed belief, inquiry into the one and doubt of the other became a crime; all change was looked on as danger, and every novelty distrusted. Where, as in England and the States north of us, men were free to discuss all things, there they had no slavery. Hence, with us, society sternly repressed individual thought on this institution, and on all the facts and fancies which we believed to support it. The next step was to glorify it, and apology became eulogy. To this, too, a literature was devoted. To belief in this eulogy or to acquiesce in it society gave its smiles; to all question of it, gave frowns, suspicion, and ostracism. As, too, it was glorified here only and by us alone, it followed that the rest of the world and the opinion of other men we ceased first to value, and then not to regard at all, and turned to the contemplation solely of ourselves and our virtues.

Now, you cannot limit the mind without dwarfing it, nor shut off all light without weakening the eye; so, when we left our faculties unused we began to lose them, and digging for ourselves a mammoth cave of darkness, we went near to be blind as its fish.

The effect was soon seen, as I have tried to indicate it to you. For authors we had commentators, for statesman politicians, for merchants shopkeepers. As wherever prescription and tradition rule, to the old all power was given, and youth was thrust aside. In like manner laws and lawyers multiplied, but truth escaped us. Routine study was never more zealously pursued, and the University provided for its law students complete apparatus of teachers, case reports, moot courts, while it taught the art of medicine without a clinic, and yearly licensed as physicians men who had never felt a pulse. The facts of our science we found in books instead of nature; not a discoverer nor an investigator was left among us; the very spirit of

inquiry was gone, and you might hear, as I have heard, an educated country gentleman gravely maintain that the bird called rail or sora every fall turns into a frog, and spends its winters buried in the mud. Fighting-cocks, hunting-dogs and race-horses we still bred in purity and excellence, but so little was known of the laws of species and the methods of breeding, that for all other domestic animals accidental mixture was the rule and degeneracy the fruit. History was so little studied for its lessons, and the laws of wealth so little understood, that I myself heard the late John M. Daniel, a leading writer and thinker, declare his belief that political economy is, as Swift thought it, all a fancy, and that wealth has no laws, proving his sincerity by the astonishing assertion that the fall of the Roman power was due to the exhaustion of her Iberian mines, and that the Spanish Empire declined because of the decrease in the supply of gold from America.

Our people poured out in ceaseless streams to create or to enrich a half-score of States. In the forty years from 1820 to 1860 our population increased only 50 per cent., though living was cheap, early marriage universal, and our rate of reproduction above the average. So late as 1860 we had but 35,000 residents of foreign birth, and Richmond, out of fifty chief cities of the country, had the smallest foreign-born population. Our comparative numbers had made us in 1800 and 1812 the first State of the Union; in '20 we were second; in '30 we were third; in '40 fourth, and in 1860 fifth; so severe was the drain of emigration and so strong the wall we built against immigration, whether of men or of ideas. In wealth, too, the same course was seen, for there is reason to believe that our slave-owning agricultural class was bankrupt in 1840, and was saved from utter ruin only by the steady rise in the demand for cotton and the steady increase in the value of slave property—an increase vaguely estimated at four per cent. per annum on the stock of slaves.

The ruling class had to restrict all activity of thought at home and to fight against science and opinion abroad to maintain its safety. Energy repressed here burst forth to bless other commonwealths or to adorn other societies. McCormick would invent a reaper; he goes to Chicago to perfect it. Maury dreams of great theories of wind and wave, but goes to Washington to work them out. Brooke thinks to help toward the ocean cable, but 'tis in the service of the United States he invents his device for deep sea soundings. Mahan would teach science, but he must go to West Point to write his textbooks.

Here in Virginia, of labor-saving invention we wanted nothing, for of the labor of slaves we of the governing class had enough, and naturally we had no wish to relieve of drudgery the white man not owning slaves, nor to make him rival the slave in production nor ourselves in leisure.

Here in Virginia, there was no longer room for energy, for we had determined we had all things in having slavery; there was no

room for inquiring minds, for we had answered Pilate's question, and asked, "what is Truth?" We said, "It is our peculiar institution."

The True, the Beautiful, the Good, and the Useful being thus attained, there could be no further common object, and consequently there was no need for Public Spirit. Hence, a people claiming peculiar freedom from the vice of avarice, refused to contribute to public works which adorn or defend a State. Hence, a people, reverencing above all things tradition, refused to preserve the memorials of their own history, and wilfully forgot the warnings of their wisest advisers. Hence, a people, glorying above all in their individuality, shrank from every undertaking except with the help of the State, and while they spoke with contempt of associated effort, and found degeneracy and weakness in the arts which make great cities, in this whole generation they produced no leader of thought, no model of style, no discoverer of truth, but fell to one dead level of mediocrity and ignorant content.

This state of things could not last in the modern world and among our race, and in the decade that began with 1850 signs of reaction appeared. At the University a school of history and a course of experimental and analytic chemistry were established, and a philologist trained in the profoundest schools of German research was called to train the young in the spirit as well as the words of Greek thought. The number of its pupils correspondingly increased, and the same impulse being felt elsewhere, the classes seeking instruction gradually widened and the standard of teaching steadily rose. Efforts never seen before were made to extend on the one hand the railroad to the Ohio, and on the other to complete the highway which should lead to the middle valley of Mississippi from the tides of Atlantic. The iron industry of Virginia suddenly expanded, and around Tredegar, at Richmond, sprang up a score of specialized iron works; the milling interest grew fast, ship building increased, sugar refining began, the coffee trade promised to make of Richmond one of its chief centres, and the great granite bed of Henrico, Chesterfield, and Dinwiddie, which had been left undisturbed since, in 1825, it furnished stone for Fortress Monroe, felt again the drill and the blast, and yielded material for the monument to Washington, and for the United States custom-house at Richmond.

The Virginia Historical Society made efforts at life, and a blind reaction against the pressure of the general causes I have recited showed itself in the custom which then began to obtain of sending our youth abroad to bring from active societies and centres of thought new ideas to enliven the torpid mind of Virginia. The State Agricultural Society was formed, and subordinate associations aided it to collect the products, to report the progress, and to enlighten the labors of that great industry. Public opinion revolted against the laws restricting the right of manumission, and the courts were forced to construe them strictly as to the heirs at law, and with all liberality as to the devise of freedom and property to the slave.

Before this reaction, however, was more than fairly begun, causes wider than those which governed Virginia's special history, precipitated the war. That it found us unready, you know. But war is the simplest of the arts, and, as all the world knows, we proved such masters of it as that we maintained for four years our lopsided and incomplete civilization against great odds, and upheld our obsolete idea against the thought, the science, and the art of the world.

We failed, of course; but in the failure awoke that Public Spirit which, like the insensible heat of vagrant gases, had laid hidden and latent, but was ready to blaze out when pressure came to make solid their mass and visible its force. Of the war and of what followed it—of its efforts and sacrifice, and of the endurance, the hope, and the common purpose with which we adjusted and must still adjust our society to its new environment—I need not speak, for it is known to you all.

It has been my task to show how we weakened ourselves by narrowing our thought. Of one institution, whether it was good or evil in itself, or under other circumstances I say nothing, but I have shown how evil it was, when, to maintain it in the face of the world's opposition, we were led to restrict thought, to dictate belief, to forbid discovery, to condemn the social principle, and so to destroy Public Spirit. With that institution our theory of States Rights had nothing to do. The theory was just, was natural to our race, and was necessary to our free development, and to save us from a centralization that must become despotism. It was worth fighting for, and it would have triumphed but for being to the apprehension of the world and to our purblind fancy, bound up with slavery and, therefore, falling with it. But they fell with a difference. Slavery fell dead, State Rights, Home Rule, Freedom was but wounded: for slavery is mortal, freedom deathless.

Already that principle of Home Rule, silent in both camps, as need was, and hid in the dust of marches and the smoke of battle, already it asserts its native power, victor and vanquished alike confessing its virtue.

Your generation, my friends, inherits the glories of the two great periods of Virginia's history, and yours is the task to shun the deadly errors of those years when principles were forced into unnatural connection with accidents, when inquiry was silenced lest change should follow, when facts were ignored lest dogma should be weakened, when dread of comparison shut the eyes of Virginia to all excellence outside her boundary, and when, with a limit put to knowledge, a veto on progress, and a bridle on energy, associated effort ceased from amongst us, and Public Spirit found its lowest ebb.

Be it yours to welcome every truth, to seek light wherever it may be found, to encourage the widest exercise of man's powers, and to forbid no province to his activity. Thus and thus only shall you prove all things, and hold fast to that which is good, and thus giving free rein to every impulse of individuality, shall you preserve that Public Spirit to noble triumphs of peace and war, to conquest

over the yet unknown realms of nature, to solve many a social problem yet in doubt, and to subdue to man's final use and benefit, those passions of his nature which still master him and divide him from his neighbor.

In the life of nations decades are but as moments, centuries but as hours, and, however a people may fall, if it but preserve knowledge, and the love of knowledge, it rises again stronger for the lesson of defeat.

Scarce seventy years have passed since Prussia, enfeebled by a paternal despotism, and so destitute of public spirit that she even contemned her own noble tongue, was, as if in a day, trampled to the earth by the Corsican, and lost, not only all that Francis lost, but lost her honor too.

Yet, you and I have seen that same Prussia so full of Public Spirit, so strong through the strength that Stein and Scharnhorst organized, but which the school, the laboratory and the spirit of enquiry gave, that she beat down with one blow the house of Hapsburg, and with another destroyed the Napoleonic idea, prostrated and despoiled the great French people, and set on a dull Hohenzollern's brows the Iron Crown of Charlemagne.

Or look at France, in her fall and her rise. Mastered by the Napoleonic legend, as Virginia by slavery, subordinating all her thoughts to the one fancy, that power and glory, wealth and stability lay in that idea, sixteen years she obeyed it, stifled opinion, forbade doubt, and shut her eyes to the example, her ears to the warning of the world; limiting knowledge lest it should shake the dynasty, making self-examination crime, and self-praise virtue, she found herself at length destitute of Public Spirit, with an army distrusting its leaders and itself unworthy of trust, and a people rash as it was ignorant, and as ready to cry "treason, treason," as it was incapable of self-confidence.

Yet, we ourselves have seen the wonders wrought by that same France in the five years since the benumbing tyranny of the Napoleonic legend was broken, and since the health-giving pressure of adversity forced the mass of the people into unity, and evolved the fire of Public Spirit. In five short years she has bound up her wounds and brought order out of the Commune; she has more than regained her industrial force, and stands to-day more respected, more powerful, and more worthy the name of nation than ever she was when the glory of Louis made her a gilded misery, or when the Little Napoleon flattered her vanity to blind her eyes and sap her strength.

So low as these great states Virginia has never fallen; nature has gifted her with a noble empire; fertile soils blossom for her, and genial skies smile on her. Countless streams make green her valleys and gathering into the mighty volume of her rivers roll by many a stately haven to her own great land-locked sea. Her people inherit the blood of the noblest races of men. To her in her virgin days came the patient, unyielding Dutch, the quick-witted

Huguenot, devoted to his beliefs, the rugged Scotch-Irishman, untamed by tyranny, and the self-contained, large brained Englishman, conqueror and ruler of the modern world.

Heritage, more magnificent never had sons of men than you and your generation. Prize it, I beseech you; guard it as you would your honor, and give it to those that shall follow you, not unsullied only and laid away in the sluggard's napkin, but with yet added worth of labor, of thought, of virtue, and of deed.

NOTE BY THE EDITOR.—We give space to this address by Capt. CHAMBERLAYNE gladly; because the time is come for us to look at things as they are. Whether we agree with his conclusions or not, we cannot shut our eyes to the facts he presents, and they do not, by any means, flatter us. It is high time that we cease to waste breath over the "glory of the past," and to address ourselves to the urgent demands of the *present*. We have been quite long enough a mutual admiration society; we must realize that we, *even we*, have faults, and some very grievous ones. No spur to good deeds should be so sharp as the consciousness of descent from an honorable stock; but the man is beggarly who boasts of it without having himself added to its lustre. Virginia the widow, is not Virginia the bride. She has been despoiled of her portion, and tasted of bitterness, and yet she is not wholly cast down. Sons are still left to her, and what are they if they will not prove themselves worthy of such a mother? The way is open to them to assert their manhood, and the day is at hand for its exercise.

THE PERFORATING POWER OF ROOTS.

It is indeed wonderful how easily the roots of plants and trees bore through hard impacted soils in search of the nourishment. They use for this purpose a sort of awl, of immense power, situated at the end of the root, and capable, with the aid of the other root machinery, of thrusting aside heavy weights, and getting through almost any obstructions. Yet the awl only consists of a mass of microscopic absorbent cells formed by protoplasm or vegetable mucus—the fluid in which vital action is first set up. The roots of the elm and maple will bore through the hardest soil of walks or streets, enter drains, twine about water pipes, and penetrate through the seams of stone or brick structures. The roots of some plants have been known to pass through eighteen inches of solid brick work, and make their appearance in a wine cellar below. Plants have a great power in overcoming obstacles, when foraging for food. They are like a hungry animal which no fences can restrain when there is food beyond. The movements of roots in soils proceed on certain principles of utility in connection with the welfare of the plant. Some need more moisture than others, and the roots will drive through rocks to obtain it; others need silicious food, and will penetrate through a clay bank to reach the desired foraging ground. The urgency with which nature drives plants and animals in pursuit of food is almost irresistible.—*Journal of Chemistry*.

[For the Southern Planter and Farmer.]

A VERY IMPORTANT QUESTION—WHERE ARE WE DRIFTING TO?

Being engaged in two important occupations, my time is so completely filled that I have always to write in a hurry. I shall condense as much as possible.

The negroes were set free and turned loose among us without any preliminary training for freedom. We had contended that the negro, left free to direct and control himself, could not live to any advantage in a temperate zone, where long winters prevail, and subsistence must necessarily be dug out of the earth by patient, persevering toil, backed by judgment and economy. Of the truth of this proposition I am now as fully convinced as ever. But he is here with us, and free at that. Those who know nothing about Sambo may prate as much as they please about his excellent qualities: they are at a safe distance from him, and know nothing of the subject that they pretend to discuss so sapiently. But one thing is certain—I speak *most emphatically*—we must control the negroes, or *ruin is inevitable* both to them and us. I do not mean by this startling declaration that we should deprive them of a solitary right *that legitimately belongs to them* as freemen; but the great law of nature declares in divers ways, too clearly to be misunderstood, that “knowledge is power,” and that inside of the grand circle that it sweeps are to be found wisdom, peace, safety, and prosperity. This law also declares just as clearly, that *ignorance enthroned is a power for evil*.

Knowledge belongs comparatively to the white race, and must have full sway and scope in all the grand departments of business, or else prosperity and progress will ever be a mere phantasm of the brain—a coveted goal that will never be reached. The negroes are the best laborers that we have or can get, but they are liable to undergo great changes in the future, unless we control them and keep them in the right channel. If left to float at will, they will zigzag in every direction along the cross and complex currents of a boundless swamp. As for white laborers, it is nonsense to talk about them where land is cheap and farming very unprofitable, they are only adapted to sections where land is scarce and rich.

Directly after the negroes were set free they were hired mostly for wages, and working under the control and direction of the whites both races bid fair to prosper. But a great change has come o’er the spirit of our dream. In the mind of the negro a great deal of idle time is the *sine qua non* of happiness. He can grasp the present, but all the powers of his intellect combined into one mighty focus fail to illuminate the dark future one inch in advance of his nose—*ever did and ever will, bating a few exceptions*. Since he has been set free, he has taxed his limited intellect to the utmost to discover some plan by which he can give a large portion of his time to fishing, hunting, meetings, visiting, politics, and general idleness; but how to make money, accumulate property, and secure the solid comforts of life, are questions with him of minor importance.

Finally they settled down upon the plan of renting land and paying said rent in cotton. This is now the negroes' plan originated by themselves, and it is fast bringing both races to temporal ruin, as I will clearly show. The white man argues thus: "A half loaf is better than none"; the negro is free any how; so if he pays his rent I don't care how he works, or what he does, or how it's done." The negro, on his part, argues thus: "My rent must be paid in cotton, so I will plant the most of my crop in that article, that when the rent has been paid I may have enough left to fill my pockets with greenbacks: then boots, calico, flour, whiskey, tobacco, mule and buggy, will elevate me high above, both at home and abroad, the dusty footmen that tramp along the pad!" The negroes have no more judgment about the proportion of corn and cotton that they should plant than children. Remember, whites, that the negroes are among us. *They must live.* If they starve, so will you. Don't flatter yourselves for a moment that the negro race can starve in your midst without dragging you down in their fall! The course that has been pursued has furnished the world with more cotton than it needs, and has raised the price of all the necessities of life, plunging the whites into bankruptcy and ruin, and bringing the negroes to the very brink of starvation! We may toil day and night to make cotton, but the more we make the lower the price, and the higher are provisions. Upon this line we may work until we become walking skeletons, and remain all the while miserably poor and half-starved, while all the world outside of us is laughing at our folly, and growing fat and saucy upon the unremunerated sweat that issues from every pore!

But to the negro again. We do not control him; he controls us! He idles away fully one-third of every year, counting from Christmas to Christmas. He makes no manure, and about half a crop upon the land that he pretends to cultivate. Soon the land will be so poor that he cannot support himself and pay rent. What then? You will take the land from him and let it rest, or sow it in grain. But what will become of the negro? He will be compelled to emigrate to Africa or the West, or they will go about in gangs, like prowling wolves, plundering the country and robbing the whites! You may call this sensational, or a mere phantasm of the brain; but consider, if you please, the signs of the times and the causes now in full operation, and their legitimate effects. The seasons for the last two or three years, in this section, were almost perfect; yet starvation is now at our doors. I have seen nearly all the renters in a neighborhood gathered around one small farmer that happened to be so fortunate as to have a little money, corn, and meat, offering to gather his whole crop in one day for a *little something* to keep soul and body together! When you see a dozen buzzards gathered around one dead snake, or as many crows pecking away at a stray nubb'n of corn, or hear the blackbirds chattering in the cracks of your corn-crib, know ye that starvation is not far off.

And what is the cause of all this? Various reasons have been

assigned; but the real cause is, the negroes have the agriculture of the South pretty much in their own hands, and they are just about as well qualified to manage it as so many children. If we give them a farm upon their own hook, they cannot run it unless we advance to them; if we do that, they cannot pay the advance back unless we unsettle them and leave them right where we found them. Many a white man has brought himself to grief on account of allowing the negro the pleasure of running a farm at his (white man's) expense, vainly supposing that Sambo could support himself, pay rent and debts, and do it all by skinning only a half-crop out of the land.

Well, what is the remedy? Is it to be found in sowing more grain, or planting more corn, or making less cotton? All these are generally pointed out by the *savans* of the South as constituting an effectual remedy. They are not the remedy, only the would-be effects of a proper remedy applied. The true remedy is—and there is no other—for the whites to take the great business of agriculture into their own hands; then the reins will be held strong and steady, and the “world's backbone” kept in the proper position. A course will be pursued adapted to secure the permanent welfare of both races for the present and future. It is generally admitted that the whites must have “political supremacy,” or the country is ruined. Be not deceived; it is just as necessary that the whites should have *agricultural supremacy* to save the country from ruin.

Finally, all sorry hands must be hired for wages. Renters must be able to support themselves; must be directed in pitching their crops and working them; must be required to make manure and keep up fences. The land they work must not be allowed, at least, to become any poorer. The law against vagrancy must be rigidly enforced against both black and white; drones must be kicked out of the hive and put on the chain-gang under an overseer. More grain must be made, and less cotton; barn-yard manure must receive more attention, and *guano less*. The low price of cotton and high price of provisions furnish an argument that will convince tillers of the soil, by and by, that they have been pursuing a wrong course. The tyrant necessity is the only argument that Southern farmers will listen to. This old tyrant is now marching everywhere through the South, and I discover a growing disposition in the Southern people to pull off their hats and make him a bow.

I now hear much talk about sowing more grain, planting more corn and less cotton, and making more manure, &c., &c. Many of the whites have a little reserved farm of their own that they are trying to make rich; but outside of this they rent the balance of their land to the helter-skelter negro, who is fast wearing it out. I again ask the question: If this course is pursued much longer, what will become of Sambo? I am not his enemy, but a better friend to him than he is practically to himself. He must be compelled in some way to improve the land he tills, or else after awhile we shall be compelled to ship him or do worse. When the black man has worn out the land allotted him, he will not be allowed to fall back upon

the white man's few "bale acres" that he has nursed as carefully as his own children.

Let a wise course be pursued in due time, and soon our country will resemble a garden; provisions will be cheap, and cotton bring a remunerative price; our wives will be happy and our children merry; Sambo will again look sleek and oily, and will whistle and sing as he did in the good old days of yore. But, in order to reach this happy state, *the white man must hold the reins, both political and agricultural, and not the negro.*

Stellaville, Ga., September, 1875.

JAS. H. OLIPHANT.

[For the Southern Planter and Farmer.]

THE BEST REMEDY FOR POOR LAND.

The first article in your October No., by S. M. Shepherd, is the best article on this subject I ever saw in an agricultural journal. I reread it to find some point on which I could not agree with him, but I could not. The article must be original; I never read of or talked with a man who dared put forth such views on the subject of weeds and pasturing lands.

Weeds, ever since the fall of man, have been considered one of the legitimate consequences of disobedience in our first parents, and it has always been considered the orthodox practice to pasture lands too poor for anything else, in order "to bring them to," as they call it.

There is no greater fallacy than to suppose lands can be benefitted by laying bare to the sun. The droppings, on which so much reliance is placed, are left in the same situation as the soil, only more exposed to the sun, which robs them of everything useful to plants, except the salts they contain, of which the land perhaps has a superabundance.

The tramping of the soil when wet is another evil of grazing, the effect of which has been so well observed by Mr. Shepherd.

Notwithstanding it is so well known that grass will run out on lands continually grazed—so much that the fields must be enlarged, or the stock diminished from year to year, until the value of land required to support the stock has raised the question in some parts as to the policy of grazing or soiling during the summer—the farmers still cling to the idea that their pastures are recuperating until the grass entirely runs out, and the weeds, that nothing will eat, kindly begin to restore something to the soil; then they begin to be deeply concerned lest the weeds should get the start of them and scatter their seeds—to prevent which they mow them and put them in the mud holes in the road, or cart them to a dry place and burn them, the same as they used to treat the martyrs.

Mr. Shepherd also observes, very truly, that "the great want of our lands at this time is *vegetable matter*." Our worn out lands have been stimulated with lime until everything has been worked out of the soil but the mineral substances, the particles of which are

capable of being magnetized, and if the proper moisture be present to afford the necessary conducting power to electricity every particle becomes a magnet, and with the lubricating effect of the water they are enabled to arrange themselves according to the laws that form solids, particularly if stirred in any way by plowing or tramping, which causes the soil to become what is termed baked. There is no way so effective in destroying the adhesion of the mineral particles in the soil as to insert a particle of non-conducting vegetable matter between them. Plow the weeds, if they are the curse of Adam; they will decompose and prove a great blessing to a baked soil.

A few years ago I saw an account of an experiment showing the effect of electricity on the soil. The author, reasoning from analogy (which is very apt to lead us astray), considered that a little artificial electricity might have a good effect on vegetable life. He accordingly passed currents of electricity near the roots, through the soil, which he was obliged to moisten freely to favor its conduction, but observed no marked effect, except a slight induration of the soil. This would seem to favor the theory of the influence of magnetism under favorable circumstances in the cause of baked soils, without the consciousness of the author of the experiment.

Chesterfield county, Va., Oct. 10, 1875.

D. S. HOWARD.

[For the Southern Planter and Farmer.]

PERUVIAN OR TALL MEADOW GRASS.

I notice in your paper for March some remarks on Peruvian or tall meadow oat grass. Having some little experience with this grass, I will give it to you, and compare it with orchard grass and timothy. Peruvian grass is very hardy and always does best when sown in the fall, although it may be sown in the spring, if so desired. It will make a crop of hay *sooner* than any other grass I have ever sown. In the fall of '73 I sowed a piece of land down to wheat and Peruvian grass. In '74 I made a good wheat crop, and the same fall I mowed considerable hay from the same land, and it now looks like an old sod, and I think will now make ten tons to the acre (by cutting twice) this summer. Sowed also in fall of '73 a small lot in rye; in spring of '74 I mowed the rye for my stock; the Peruvian grass then came up and headed out. When compared with orchard grass and timothy it stands as follows: Timothy can be cut but once no matter how rich the land or how fine the season; while Peruvian grass can always be cut twice and sometimes three times, and will make fully as much hay *at each* cutting, and as good as to quality *if properly cured*. Peruvian grass must never be allowed to get wet, for when wet it turns yellow, which injures the looks of it very much. Neither timothy or Peruvian grass can withstand drought like orchard grass. Orchard grass is a year longer making a crop and a sod, but when once a sod is made it lasts forever, while a Peruvian or timothy sod does not last but five or six years at best. If the season is favorable the difference between orchard

grass and Peruvian is not so perceptible, but when a drought sets in orchard grass will soon shoot ahead of either Peruvian Grass or timothy. I believe Peruvian Grass does better on poor land than orchard grass; but on good land if you want a grass that will stick to you like a faithful friend, through summer and winter, wet and dry, orchard grass is the grass for you to sow. Peruvian grass I place second and timothy third.

If Mr. H. G. H's neighbor will *compost* his manure and then apply it to his grass he will derive *twice* the benefit from his manure that he now gets by applying it green. He may argue as he pleases, but the best of his manure is carried off in the air when applied green. I think he is right about getting a good sod, *but get your sod and save your manure.* Apply the compost on the top.

Montgomery county, Va.

W. F. TALLANT.

[For the Southern Planter and Farmer.]

COMMERCIAL FERTILIZERS.

DO THEY PAY THE FARMERS OF VIRGINIA?

Having been a farmer in Virginia for 35 years, and having used commercial fertilizers for the last 20 years (save the four years of war), I have come to the conclusion that they do not pay the farmer who raises only wheat, corn and grass. I believe that if the Chincha Islands (which gave a start to these commercial fertilizers) had never been discovered the State of Virginia would have been twenty millions of dollars better off to-day than she is—nay more, I believe the sum spent in fertilizers that have paid no profit, together with the actual depreciation of the land by the use of them, would, several years ago, have paid the State debt, and yet I believe more of them are being used this season than ever before—building up the manufacturers of it, most of them outside of the State, forcing all the money to the commercial centres and impoverishing the farmer, and worse still, his land, which is his all. I take the ground that bone, lime and plaster only are permanent improvers—that all others are merely stimulants to the soil and crops, and, like whiskey to the human system, the more and longer you use them the more certainly they destroy. In the first place, the actual commercial value of these manipulated fertilizers is from \$14 to \$24, and the farmer is made to pay from \$45 to \$55. Then apply it to the wheat crop if you please, which is considered the money cereal of our State, and see the result. The average crop of Virginia is about seven bushels per acre, worth, in market, at present price of wheat, after taking off cost of transportation, \$7; take off the lowest cost of fertilizer per acre, say \$3, and I believe it is nearer \$5, and you have \$4 left; take out one bushel, equal to \$1, for seed, and you have \$3 left for plowing, seeding, harvesting and threshing an acre of land. The cheapest labor known in the world, even in China, could not live at that. In fact a good hearty man would eat up the remnant of his crop

(after taking out seed and fertilizers) while making it. Does this pay? I am told we must use fertilizers to get our land in grass. My experience is that it is a positive injury in that respect; for four years out of five now, we have droughts in June and July, and these fertilizers, being heating in their effects, contribute with the drought to destroy the young grass, and, in truth, I can point to fine farms (where those manipulated fertilizers of almost any brand have been used for years, discarding the use of plaster) where not even weeds will now grow without a dose, and an increased dose of these stimulants; and suppose it does give a set of grass, it acts merely as a stimulant, and the grass is grazed off or mowed, and in two years the stimulant gives out, the grass dies and leaves the land exhausted and bearer than before. My observation is, that bone and plaster are the only fertilizers that will grow grass permanently on *all* soils. Lime is a greater improver on many soils, but not on all, many of the red soils in Piedmont Virginia having sufficient lime on them. Peruvian guano and all, or many of the manipulated fertilizers, *honestly* manipulated will pay on tobacco, where the crop will average in price \$10 per hundred, for the best of them will make a crop on land that would make none without it; and on soils so entirely exhausted that it will bring absolutely nothing, and can't be injured. On wheat and corn it will not pay unless at \$2 a bushel for the former and \$1 a bushel for the latter.

Then what are the farmers in Virginia to do? It is clear that a Virginia farmer making ten bushels of wheat to the acre, at a cost of \$5 per acre for fertilizers cannot compete with the rest in raising wheat, 40 bushels to the acre, without fertilizers and paying but little more freights to the seaboard markets, than we do 100 miles off, which is an outrage on the part of these railroads. I say stop using stimulants at any price. Save and husband all your farm manures, from stable, cowpens, ashes, liquid manures, &c., &c. Don't throw your soapsuds out on the ground about your door, and don't let the ashes and wood pile manure accumulate like little mountains, but save, husband and *apply* all to 50 acres if you can; if not 50, to 20, 10 or 2. Use as much bone or lime on 2, 10 or 20 acres, more as you have means to buy, and apply plaster, which is the cheapest and best of the three, to all your cleared land, whether in grass or crops. Sow down in grass that 2, 10, 20 or 50 acres, and next year take as much more and improve the same way, and on all your unimproved land graze sheep. If our legislators are afraid of their popularity for re-election, and won't give us a dog law, get \$2 worth of strychnine and you can protect any moderate size farm for a year against dogs. By these means, Mr. Editor, the poorest farm in the State can be made to blossom, and, with *economy and industry*, the owner can soon use bone, lime and plaster enough to make it produce anything; but, my word for it, his land and he will get poorer and poorer every year with the use of these manipulated stimulants. I will write you in my next some facts and experiments in the use of plaster, which

I believe is the best fertilizer of all for its price, so cheap that it is within the reach of all, and not a stimulant as some suppose.

VALLEY, PIEDMONT AND TIDEWATER FARMER.

[NOTE BY THE EDITOR.—Our correspondent is very nearly right. The use of *Peruvian Guano* has certainly impoverished our lands and people. In general terms we think Bone the best of all fertilizers. Lime and Plaster are barely manures—they are generally thought to act chemically. The injurious effects of *Peruvian Guano* were recognized soon after its use was commenced. The amount of ammonia contained in it was too great for its phosphates, and being a powerful solvent took out of the land those mineral elements in which the guano itself was deficient, making a fine crop at the expense of the land. It was to remedy this defect in *Peruvian Guano* that manipulated manures were first made, and bones and phosphatic guanos were first used for that purpose. Manipulated guanos when *honestly and judiciously compounded* have generally made better crops than *Peruvian Guano* alone, and instead of impoverishing have improved the land. They certainly enable us to get a stand of grass on land where it would have been impossible to have secured it without them. Of course the benefit of the use of a commercial fertilizer whether in grass or improvement of the land, as well as the improvement from any other source, can be neutralized by a scourging system of grazing or cropping, but the fertilizer should not be blamed for that.

We think our correspondent is too sweeping when he says the commercial value of these fertilizers is from \$14 to \$24 per ton. We have before us one of Prof. White's reports to the State Agricultural Society of Georgia, in which he gives the commercial value of 16 of these fertilizers, ranging in price from \$35 to \$65 per ton, and the lowest value affixed by him is \$25, (which, by the way, is that of a natural guano), and the highest is \$54 63 per ton, which is affixed to an article sold at \$50 per ton. These values do not include the cost of bagging and freight to place of sale, which is from \$3 to \$5 per ton. This would show that the *standard fertilizers* made by *responsible parties* generally contain the value of the money charged for them.

We agree with our correspondent in the estimate he places upon bones. When pure, and unsteamed, and finely ground, they are very valuable, and will be found more profitable, pound for pound, than *Peruvian Guano*. Bone Dust and Bone Meal are slow in their action, and this has led to having them dissolved with acid. When ground as fine as flour they act as quickly as dissolved bones, and are more economical to the farmer, at a higher price than coarse bone, or dissolved bone, because they contain all of the ammonia, the greater part of which is destroyed when dissolved, and they *contain no moisture*. (33 to 50 per cent of dissolved bone is water and acid,) and being much more active than coarse bone a smaller application will give the same result, thereby reducing the capital necessary to fertilize a given area.

Would it not be a good idea for farmers who distrust manipulations to buy guano and finely ground bone and mix them themselves? A mixture of one-fourth to one-third *Peruvian Guano* with three-fourths or two-thirds Flour of Bones would, we think, make a fertilizer which would neither impoverish the land or burn up the grass—would make a paying crop of wheat—insure a stand of grass and so put the land on the road to permanent improvement.

Our correspondent owns some of the largest and *richest* estates in the Valley, Piedmont and Tidewater districts of Virginia, and has no compeer as a farmer in these sections of the State. We thank him for this article, as well as for his proposed article on plaster.]

CULTIVATE MORE FRUIT.

There is no doubt but that the free use of good fruit is highly conducive to health, and, indeed, almost indispensable to it. Much of the sickness in the western country is occasioned by the want of it. It is the great scarcity of good fruit that creates such a demand for physic. The various fevers and bilious disorders prevalent in the summer season are more owing to the want of it than to any other cause. And not until fruit is generally cultivated and used as an article of medicine, instead of the physician's prescription, we have no doubt it would be far better for the patient.

Fruit is more needed throughout the summer season than almost any other part of the year. The farmer cannot take a step which will add more to his own joys and to those of his family, than by having such a succession as will furnish him with fruit the entire year.

First on the list in spring time comes the delicious strawberry. But a little spot of ground is used for its cultivation for the use of the family. Its healthful qualities are well known. Cities well supplied with it are remarkably exempt from disease while the strawberry season lasts. We have accounts of wonderful cures effected in ancient times by its use. There are many varieties, but it is not our purpose to note the best of these at this time.

Next in order comes the raspberry—a most excellent fruit, and indispensable to every family. Then follows the blackberry, the cherry, currants and gooseberry. Then comes the apricot, the peach, the nectarine and the plum. Apples and pears also commence ripening early in summer, and the winter varieties, if properly stored, may be kept till the appearance of fruit the next season. Who will not have this succession? How much it would add to home happiness.

[For the Southern Planter and Farmer.]

WHAT MAKES THE RIGHT KIND OF A WIFE.

In noticing one of your publications I saw the piece written "On the right kind of a wife." But our correspondent never once said what made that good wife; and what made her smile so much. It is the affectionate husband, one who encourages her efforts with a smiling face, and helps her out of her little troubles; one who makes pleasant surroundings at home. When she looks at her children, helpless innocents, for whom the world has no inheritance but a lazy father, and her children, half-clothed and half-fed, beseeching her to give them such things that she is not able to do within herself; can she be happy at home if she has any pride or respect for her family? The man is the head of the woman, and it is natural for the woman to look to her husband to do things for herself and children, though they look in vain many a time; but when she has confidence in him, and knows that he will manage his affairs to the interest of his family, she is contented, and though she may be deprived of his

company all day, she looks forward to the time when he will be at home with an affectionate smile for her and a kiss for the little ones, and then cheerfully speaks with her of the events of the day. When this is the case she is compelled to be happy. But when he starts in the morning and spends the day walking about, or sitting with idlers, who have nothing to do but laugh and talk and drink whiskey when some one offers it to them, and then at night comes home with a frown, perhaps cursing or abusing his wife because things have not gone on right, and if she asks him a question she gets no answer but yes or no, or, I don't know, and that in the shortest way possible. Now I ask how can she be happy there, or how can he be happy there? They see nothing at home to make them happy but poverty and disgrace, and that has never made any one happy. If the man wishes to have a smiling, dutiful wife, he must be a smiling, affectionate and encouraging husband. Woman! weak woman! how can she smile unless she has something to make her smile, for smiles can never come naturally from a sad heart.

FROM A LADY FRIEND.

[NOTE BY THE EDITOR.—We are willing to concede that good wives are the rule and bad ones the exception. We are willing to go farther than this, and say that where there is one wife who fails to do her duty as such lovingly and cheerfully, there are two husbands who fall very far short of this, yet it stands out as a fact that the happiness of homes depend almost exclusively upon the wife. We cannot agree with our fair correspondent. A man of business spends very few hours with his wife, and he, after all the toils and conflicts, and often disappointments of the day, if he goes home and finds the one for whom he has toiled and labored all day in anything else than a cheerful mood he feels that all his toil and labor have been in vain. This is not sentimentalism, it is sober fact which every man knows and feels. The man who, when met with a smile, repulses his wife, is a brute, and don't deserve to have a home of any kind.]

[For the Southern Planter and Farmer.]

A NEW REMEDY FOR HARD TIMES.

Ten years ago the war closed, and I have been looking forward, from year to year, thinking that the next would bring us better times, but I see no change and we cannot expect much better times until we do better ourselves. All must go to work. We spend too much time taking pleasure. We must not stop our work to go to every place of amusement, and spend our money foolishly. If we do, we will ever be at the foot of the hill. And young men, let me whisper softly in your ears and tell you that time is flying with rapid strides, and old age will soon be here, and if you wish to live comfortably in declining years you must make provision in your youthful days. Many of the young men spend too much time in courting; or going to see the girls. And nine times out of ten they would think more of you if you would stay at home and try to accumulate something to take care of her when you get her. Go to work and try to buy a home

for her; try to have a plenty there when she comes. It is a mistaken notion to try to get the girl first. Make every preparation for her, and then you will find it an easy task to select some fair one to call your own. Some young men are five or ten years trying to get married; they perhaps succeed at last, and they carry her from her father's house, where she lived comfortably, and they have no home to call their own. And he is too poor to give her a neat apparel. Now, young man, commence from the first day of the year, and set down every hour you loose, and at the end of the year you will find you have lost months; and in five years you will find you have lost years doing nothing. And now, young ladies, I have something to say to you. The times have been when you could get a dress from ten yards of cloth; now it takes from fifteen to twenty. You could once fix up your hair in a becoming manner with the use of a few hair-pins; now it takes about a dozen different things to get it "tucked up" in the present style; and then it resembles a knot on the camel's back. And it takes you all your time to keep in the fashion. Now hard times will certainly remain with us as long as things go on this way. If you would spend your time in learning household duties and reading useful books, laziness and the frivolities of fashion would sink to rise no more.

FROM A SUBSCRIBER.

[NOTE BY THE EDITOR.—There is a good deal of sober common sense in what our subscriber says, and our young men and young women would do well to profit by it. We differ from our friend, however, in some respects. We do not think a young man ought to wait until he has a home before he marries. Upon the contrary, we think that if a young man is sober and industrious, the sooner he marries after he attains his majority the better, provided, of course he makes a suitable choice.

It is well known that most of our young men never save anything until they are married, and while we may argue against it as much as we please, the fact stands out undisputed and indisputable.

Men must have company, they are naturally gregarious, and a good wife is the best and most economical companion a man can have].

DOES PORK-RAISING PAY IN THE OLD STATES.

This question is frequently discussed, and usually answered in the negative. A writer in the *American Agriculturist* comes to the conclusion that pork-raising does not pay in New England, that pork sells (on account of Western competition) for less than it costs. This may possibly be true in hundreds of cases, but when he goes on to enumerate what pays better, he mentions sheep, in mutton and lambs, as paying better than pork; but this is quite a miscalculation, as mutton does not bring more per pound, on an average, than pork, and from the most careful experiments of Lawes and Gilbert it is proved that the pig utilizes in growth 20 per cent. of its food, while the sheep does only 12 per cent. This may be considered as a demonstration that a pound of pork is produced at less cost than a

pound of mutton. Very little can be claimed on pasture for sheep that does not apply to the pig. The pig is a grass-eating animal, and has often been found to increase from one to one and a half pounds per day upon clover. Any comparative trial upon feeding sheep and pigs upon grain or upon food of the same cost, will demonstrate that the sheep has no advantage of the pig. He also mentions that grazing and fattening cattle is more profitable, but in this he is quite as much at fault, for beef does not, on an average, bring as high a price as pork; when higher it is exceptional, and the cattle do not utilize so large a proportion of their food as pigs. One hundred pounds of corn will make more pork than beef, as can be very easily tested if one is feeding a few steers and pigs at the same time. We have tested it by the following experiment: Fed two three-year old steers, weighing 1,200 pounds each, upon good hay and corn meal, and five pigs, eight months old, weighing, on an average, 160 pounds each, upon sugar beets and corn meal; counting a pound of beets equal to a pound of hay (which is above the usual estimate for beets). The result was that it took six pounds corn meal to make one pound increase live weight during forty days, while it required only four pounds of meal to make one of live weight on the pigs. The steers ate 480 pounds each of meal, and gained eighty pounds. The five pigs ate 1,000 pounds of meal and gained fifty pounds each, or 250 in all. The pigs were a cross of Chester-White with common blood. We found that the pigs would eat just about the same weight of beets as the steers of hay, and the same of meal. Pigs eat much more, proportionally to weight, than steers, and gain much faster.

One great reason that pigs are condemned by Eastern feeders is, that they keep them too long, mostly in a store condition, wherein they are always kept at a loss. The pig, to be profitable, must in no case be kept beyond twelve months, and ten months is the better rule; at which latter age they should weigh 300 pounds. We have no domestic animal that utilizes its food better than the pig, and none that pays a better profit unless the product brings a higher price.

SUFFOLK HOGS.

A great deal of pains has been taken by interested parties to bring the Suffolk hog into public notice and popular favor. I have just been reading an article in one of the agricultural papers in which the writer says "we think the Suffolk keeps easier, matures quicker and makes better pork than any other kind of hog, at least in northern Ohio." This is saying a great deal. If it is true, there is no longer a doubt which breed of hogs a farmer ought to keep. But those who are interested in the sale of other breeds will hardly admit all that has been claimed for the Suffolks. Take the claim that it "keeps easier." In one sense this may be true. Probably a Suffolk hog will not eat as much as a Chester-White of the same age, but the reason can easily be found in the fact that the former is not

nearly as large as the latter. While the Suffolk eats less, it also makes less pork. And as the object in keeping hogs is not to see how many can be kept on a certain amount of food, but to obtain the largest possible quantity of pork from the food consumed, the fact that one breed does not eat as much as another should have no bearing upon the choice of breeds. There is no doubt that the Suffolk "matures quicker" than some other breeds. In certain localities this would be a very desirable quality, while in others it would be a decided objection. If small hogs are wanted, the Suffolk will fill the bill. They stop growing at an age when the Chester White has hardly reached half its size, and while the latter keeps on growing the former is rapidly fattening.

In regard to the claim that the Suffolks make "better pork than any other hog" in northern Ohio, I do not see how it can be proved. I do not know that the meat of this breed of hogs sells any higher in market than that of other good breeds. That the pork is good I have no doubt, but that it is better than can be obtained from other breeds I seriously doubt. The writer to whom I have referred would make us believe that the Suffolks are the most profitable hogs for the farmer to keep. That is in regard to the first cost of the stock. The profits of this business do not depend entirely upon the receipts. The expenses must also be considered. If a farmer wants to grow 2,000 pounds of pork, and is obliged to buy his pigs, it may make considerable difference with his profits which breed he chooses. Probably the amount of food required to produce this amount of pork will be about the same whether a small or a large breed is taken, but in one case more pigs must be obtained than in the other. The price of the pork will be the same in either case.

In the case of poultry, the product brings so much higher price that the profit is greater if the stock is kept healthy. Dairy products also bring a higher price and pay better, but the pig is the best animal to utilize the refuse of the dairy. When farmers learn that the pig is simply a machine to make pork out of vegetable food, and they adopt the economical principle recognized in running other machinery, to keep it going to its capacity, there will be no disappointment about the profits. The simple point to be made is, the farmer takes nearly or quite twice the length of time necessary to reach a given weight, say 300 pounds, and the loss is in the keeping the pig half of the time without growth.—*Live Stock Journal*.

AN honest reputation is within the reach of all men; they obtain it by social virtues and by doing their duty. This kind of reputation, it is true, is neither brilliant nor startling, but it is often the most useful for happiness.

THE farmer who is too poor to take a paper devoted to his interests, will always be poor in purse and management.

[For the Southern Planter and Farmer.]

VIRGINIA DELEGATION AT THE NORTH CAROLINA STATE FAIR.

The delegation from the Virginia State Agricultural Society, an gentlemen representing the trade interests of Richmond, Petersburg and Norfolk, attended the North Carolina State Fair at Raleigh, and were very courteously received.

After visiting the extensive Fair grounds and fine exhibition on Wednesday, the 13th instant, where they were met by and introduced to the officers of the Society and many citizens of the "old North State," they were invited in the evening to be present at a general meeting of the Society, which was held in the House of Representatives, in the Capitol, and had seats assigned them. An address of welcome was then made, which was responded to by Col. Knight, President of the Virginia Society, and also by Messrs. Ruffin and Watt of the delegation.

An interesting address was then made by one of the professors of Chapel Hill University, on the subject of an agricultural department in that institution. Dr. Elzy, one of the Virginia delegates and professor at the Blacksburg Agricultural College, was then called on, and made a most admirable off-hand speech on the subject of technical education, which for its practical good sense, made a most profound impression on his hearers. The meeting closed with the most cordial feeling between the citizens of the two States who were thus thrown together.

SUBSTANCE OF THE REMARKS OF COL. KNIGHT, PRESIDENT OF VIRGINIA STATE AGRICULTURAL SOCIETY:

We have come here, my friends, not for the purpose of speech-making and mutual laudations. We have come to mingle with the people of the "old North State," and to cultivate those kindly feelings which should exist between the citizens of the two commonwealths. We have come to see the exhibition of the products of your soil, and of your mines, the fruits of your orchards, and the cattle which have been bred on your pastures. We have come to take counsel and encouragement in all efforts to restore and advance the material interest of the people of both States. In a mission such as this, we accept your kind welcome. These annual gatherings of the people of the States, bringing with them the products of their skill and labor, have done much to infuse energy and confidence into the *individual worker*, whereby the *general wealth* and prosperity are increased.

I could tell you how Virginia, like your own beloved State—both impoverished by a cruel and worthless warfare—has been benefitted by her own Agricultural Society.

Time will not permit, but I may say, in brief, that ten years ago in April last the conflict of war being over, its sad results were on us, (of which it is useless to speak, as they are familiar to us all), and the heavy cloud which overshadowed us seemed rather to increase than diminish. Military government in State affairs, and carpet-bag

government in local politics rendered us powerless. We had from sheer necessity to leave to the powers which controlled us all matters outside of our immediate fire-side interest, and these were not always exempt from interference.

This impressed the fact that as *owners of the domain* we had to look to it, and the fruits of honest toil on it, for the support of our wives and children and the means of payment of debts contracted under better circumstances. In this condition of things, our farmers had to bear the largest part of the burden of the adverse times; and with old debts hanging over them, land which they had not capital and labor to work, homes made desolate, they were overwhelmed with despondency and gloom. It was necessary to confront the situation and in every sensible and practical way to relieve it. A convention of farmers was called to assemble at the capitol which was well attended. The questions presented were earnestly discussed, and hope and confidence were strengthened. Words of encouragement were spoken by members, and by one which went like an electric shock throughout the State. The State Agricultural Society, founded by Ruffin and other men eminent in agriculture, was still an organized body, and had preserved a portion of its funds from the wreck of war, and it stepped to the front. The friend to whose words I have alluded was elected to the vacant Presidency, and all the other vacancies in the official corps were filled with true and faithful men. A Fair was determined on for the ensuing Fall and a heavy premium list, under the circumstances, was adopted and published. We looked with fear and trembling on the result, as our people were so little able by their personal presence, or otherwise, to contribute to or receive the benefits contemplated and hoped for. An overruling Providence directed all things well, and our first Fair closed with the general impression that it was equal to, if not better, than the best before the war. Six others have succeeded, and the seventh is now nearly at hand, and year by year the last is *pronounced best*—thus showing the continued progress of our people.

Visitors to our Fairs may now see the stalls, pens and coops filled with cattle, horses, hogs, sheep and poultry, the largest portion of which have been bred in our own State, and for purity of blood and skill in breeding, cannot be excelled in any country.

They will also find agricultural implements and machinery of the best kind, which have been produced by the hands and skill of our own citizens; and will see the products of the mines fashioned for use in many varied and important forms by our own Foundries. And as the result of these facts, Virginia is fast growing in her agricultural and manufacturing prospects; and for this she is indebted, in a great measure, to her agricultural and mechanical societies.

Our farming people, however, are far from being fully relieved. They have a large surplus dead capital lands which they cannot cultivate, and cannot rent or sell to advantage, and on which they must be taxed. The relief from this burden will, I hope, soon come in the shape of immigration. We will not, therefore, despond, but

will cultivate only as much of our lands as we can *judiciously and profitably*, and leave the residue for the time which surely will come when it will be made valuable to us.

This brief picture of the condition of Virginia, will, in the main, represent that of your own State; and, therefore, we may take counsel together and extend to each other mutual encouragement. Let us, then, associate more intimately in all relations of trade and personal intercourse, and, be assured, that the interests of Virginia and North Carolina are "one and inseparable."

Raleigh, N. C.

T. E. C.

OFFICERS OF THE STATE GRANGE.

Master—J. W. White, Eureka Mills, Va.

Overseer—T. T. Tredway, Prince Edward Va.

Lecturer—J. W. Morton, Eureka Mills, Va.

Steward—Wm. McComb, Gordonsville, Va.

Asst. Steward—I. B. Dunn, Washington county, Va.

Chaplain—J. C. Blackwell, Buckingham, Va.

Treasurer—W. B. Westbrook, Petersburg, Va.

Secretary—M. W. Hazlewood, Richmond, Va.

Gatekeeper—M. B. Hancock, Charlotte, Va.

EXECUTIVE COMMITTEE.

A. B. Lightner, of Augusta.

R. V. Gaines, of Charlotte.

A. M. Moore, of Clarke.

R. L. Ragland, of Halifax.

MAINTAIN YOUR ORGANIZATION.

The Grangers must pardon us for urging them to maintain their organization in tact at all hazards. To do this requires energy, vigilance and good sense. They must not only exert themselves and work manfully, but they must be wide awake and subordinate their intelligence to the great ends contemplated. Without these essential prerequisites no organization can succeed. We have, all over the country, weak and inefficient churches, made so by the want of these very elements; and the same remark is applicable to all secular associations of men. There must be, too, a vital and living interest in the peculiar objects and aims of such associations. This interest must never flag—never give up. It should be kept, all the time, to fever heat. *Enthusiasm*, is the word. The fire must burn within. No one yet ever achieved success in any undertaking where there was no lively interest felt in its ultimate triumph.

To this ultimatum the Grangers must be brought. They must throw their souls into their work, or else they will die out. One thing they have to guard against, and that is, not to be led astray by the large promises of financial gains, by which we mean that they

have higher and more exalted ends to reach. The heart and mind deserve more care and attention than the body. It is well enough to look after our pecuniary interests, to save money, and to buy as cheap as we can and to sell for the highest figure, but, in the meantime, it is far more important to cultivate a higher moral sentiment and to fortify the mind with the richest stores of information. They cannot perform a more important duty, one that will bring with it more genuine pleasure and permanent improvement than the discussion of such subjects as relate to farm, garden and household. Too many are controlled by the mere paraphernalia of the order—its rites and ceremonies. Lay these aside, and strike for something more deserving our attention. Form libraries, subscribe for useful papers and thus extend the area of knowledge. We must steadily bear in mind that all success depends upon the expansion of the intellect.

The Order has done well not to have anything to do with politics. It has passed over this dangerous shoal and thus silenced our enemies. But let us not be deceived about one thing, that we should ignore the discussion of questions relating to political economy. That is all bosh. It is our duty to investigate such questions, and, especially, the question of the currency. We are more deeply interested in it, at least for the present, than any question of the times. We cannot all think alike about it, and for that reason, if no other, we should seek to interchange views and try to come together.

[NOTE BY THE EDITOR.—We copy the above from *The Living Age and Outlook*, published in Kentucky. We heartily endorse its sentiments. The past year has been a year of progress among the Patrons of Husbandry in Virginia, and the next meeting of the State Grange, which takes place in January, is looked forward to with a great deal of interest. The last Grange adopted a constitution and this is its year of trial. When the results of the year are summed up we will be able to tell whether it has been a complete success or not. If the system we have adopted has any flaws in it, we will then be able to find them out, and remedy them. The farmers of Virginia have gone into this movement in earnest—they mean to accomplish through its agency all the good it is capable of accomplishing, and no present disappointment or partial failure will discourage them or cause them to abate their efforts to make it a success.]

THE NATIONAL GRANGE will meet in Louisville, Ky., on the 17th of November.

THE MARYLAND PATRONS will petition the next Legislature, to do away with the present system and substitute therefor, private inspections of tobacco.

THE CALIFORNIA GRANGERS' INSURANCE COMPANY has increased its capital from 100,000 to \$500,000. During the first twelve months of its existence it had risks to the amount of \$3,000,000 and its aggregated losses were only \$346. It is on the mutual plan and the insured participate in the profits. Nothing but country risks are taken and the loss can never, as with city companies, be severe.

THE EXECUTIVE COMMITTEE of the National Grange recommend that the Secretary of each County or Pomona Grange, report to the Secretary of the National Grange within ten days of the close of each quarter, the condition of each staple commercial product, and that the reports of the County Grange be formulated under appropriate heads, and a copy of the complete report furnished each County Grange. This is a good move. By it the Patrons of each County Grange will have in their own hands the most accurate data, from which to estimate the probable prices which will control both, what produce they wish to buy, and also what they may wish to sell.

JUNCTION GRANGE, Marshall county, Kansas, believing that if the birds were permitted to live, the grasshoppers would, in all probability, soon disappear, passed the following resolution: "That we, the members of this Grange, will not allow any one to kill birds on any farm within the jurisdiction of this Grange, and that we hereby give notice to all persons found killing birds on our farms that they will be prosecuted to the fullest extent of the law."

Editorial Department.

THE NEXT LEGISLATURE.

During our editorial management of the *Southern Planter and Farmer* we have carefully avoided meddling in politics as such, yet there are some questions which though somewhat political in their nature, or at any rates sometimes used by politicians for party purposes, which are so intimately connected with the well-being of the farmers of the State, that they require at our hands some notice.

We have on every occasion endeavored to impress upon our readers the necessity of a dog tax. We are aware of the fact that, in many localities, this is very unpopular, but believing as we firmly do, that the welfare of the farmers of Virginia and of the whole country would be greatly promoted by the *taxing out of existence* three-fourths of the dogs that infest the State, and that decimate the flocks of those who try to raise sheep, we do not hesitate to say that it ought by all means to be done. We hardly know what more to say than we have said, but we believe that if the farmers of the State, (a very large majority of whom are heartily in favor of the tax) will only memorialize the legislature *en masse* to pass such a law, the members will not disregard their wishes. We suggest the following as a form which would be convenient and convey distinctly the wishes of the signers:

"We the undersigned farmers of ——— county, petition the Legislature of Virginia to pass a law imposing a tax of ——— dollars, upon every dog owned by a citizen of this State, and appropriate the fund thus raised, first, to reimbursing the farmers whose sheep may have been killed by dogs, and the remainder to go to the general improvement of the county."

[Signed].

This is merely suggestive.

Tennessee raises \$30,000 this year by her dog tax, and other States even larger sums, and sometimes when passing among the freedman sections of our towns, we think that a tax of \$1 per head on dogs would largely aid in extinguishing the State debt.

Persons who have never been accustomed to stock, will hardly realize the vast loss the farmers of the State are suffering year after year, by being unable to keep sheep. It may be broadly asserted that there is hardly a 200 acre farm in the State that would not maintain from 50 to 100 sheep in addition to the stock now kept upon it. If we estimate the return at \$2 per head, which is very moderate when lambs are selling at from three and a half to six dollars per head, and wool in the gross at from thirty to forty cents per pound—it would very nearly double the actual profit on many of our farms. *Let us have a dog tax.*

THE FENCE LAW.

Hardly a week passes that we do not receive a communication of some kind with reference to the enclosure law of the State. The present enclosure law, subject as it is to local option, is very good so far as it goes, but practically it subjects a very large class of our citizens to all the burdens of both systems. In many places the no-fence law is adopted, by one county or part of a county, while the opposite system prevails in the adjoining county or township. In this case, those living upon the border have all the burdens of both sections to bear.

What we want is a law applied to one or more of the large geographical divisions of the State. Sections bounded by rivers that are lawful fences, or by mountains sufficiently large to make natural barriers to stock, should all be under the same systems. Our legislature should make such alterations in the present law as would conform it to these suggestions, and then it would not work so unjustly to those living upon the line between the two systems.

ENCOURAGING HOME MANUFACTURES.

The development of our manufacturing interest as a means of creating a home demand for the perishable produce of our farms, is another matter that should claim the attention of the in-coming legislature. We already have at different points in our State, some very flourishing manufactories of woolen and cotton fabrics, farming implements and machinery of various kinds. At Charlottesville, they have a woolen mill and an implement manufactory, which are turning out excellent articles of their class. Indeed the woolen mills of Charlottesville with those of Fredericksburg, make goods which in quality, finish and price, will compare favorably with those manufactured anywhere in the North. Richmond, though not appropriating one-tenth of the water power which rolls its almost inexhaustible strength at her feet, has many first-class factories. In the matter of farm implements, we have the Watt Cuff Brace Plow, the Starke Dixie Plow, the Farmers Friend Plow, and the Granger Plow. Cardwell and Company's extensive manufactory, devoted principally to making threshers, which are superior to anything we have ever seen, at any rate for the price. At Charles T. Palmer's, manufacturer of Valley Chief Reapers and Mowers, and H. M. Smith & Co., manufacturers and dealers in all sorts of agricultural implements. This does not exhaust the list, but it serves to show something of what we are doing. With all these manufactories, three-fourths if not seven-eighths of the manufactured articles used in Virginia are made in other States.

If the legislature would pass a law exempting capital invested in manufactures from taxation for a short time; long enough to get the factories in successful operation; we think it would be calculated to encourage the introduction of foreign capital.

THE ETHICS OF BUTTER.

Going through one of the markets in Richmond some time since, we observed, at the stand of a dealer, several packages of "Goshen" (New York) butter. On expressing surprise at this, inasmuch as Virginia should be able to produce butter enough, both as to quantity and quality, to meet the demands of her people, he answered: "We are forced to this course for those who want honest butter, and I will give you the reasons: In the first place, Goshen butter runs perfectly uniform, and every grain of weight you pay for it is *actual butter*; hence every buyer is satisfied. In the second place, our Virginia folks too often show a disposition to the contrary: the most common trouble is to be found in the large quantity of buttermilk that is left in it. This settles at the bottom of the jar and is paid for at the market rate of butter; which is too high a price for something that is absolutely worthless; besides, the presence of this buttermilk makes the butter frothy and causes it to turn rancid directly. Again, when it is marketed in rolls, we have gotten whole packages, in which every roll had a cabbage stalk snugly packed away in the centre; others show pieces of iron or small stones. Again, the heart of the roll will be composed entirely of lard, the butter on the outside running say an inch to an inch and a half thick. We have encountered them, also, packed in the heart with pure ground alum salt; and sometimes filled with clear water. Again, the rule of "tare and tret" appears to be fully mastered; for we not seldom get firkins marked with the tare usual on vessels of that size and character in which we find the staves, as they approach the bottom, swell to the thickness of some three inches. We pay, in consequence, "butter price" for three or four pounds of wood, and that eats up the profit on the package. The trouble and expense attending reclamations for our losses by these "ways that are dark and tricks that are vain," induces us, as a rule, to avoid the purchase of "home-grown butter," except for such of our customers as *will have* a low-priced article, and when we can't otherwise avoid it."

This was certainly a delightful revelation. It shows that human nature is marvelously human, no matter where you find it, and that cupidity is confined to no particular section of country, although we have heard, in our time, patriotic Virginians swear it only existed—not in Virginia. Now, "nesting" butter is no less infamous than "nesting" tobacco, and we know of but one remedy for it, and that is to take the trouble to find out the names of the *persons guilty of it*, and publish them in the papers.

It is a shame that Virginia butter, because of the discredit thrown upon it by the conduct of unworthy people, should rule 5 to 10 cents a pound less in the market than that from New York, or other places, where honest butter is sold.

THE GRAPE CROP OF ALBEMARLE.

It is certainly a source of great pleasure to us to print such a statement as the following, which we clip from the *Charlottesville Chronicle*. It shows one direction in which we are diversifying our operations, and, as time advances, we will find a wine interest growing up in this State that will result in adding hundreds of thousands of dollars to the income of our people. The way to foster the "temperance cause" is to induce men to leave off "strong drink," and take to light wines. Men are not put into the world merely to exist, but to enjoy themselves, and the Almighty has made ample provision for it in every way. Because some men make gluttons of themselves and die with

apoplexy, does not prove that food is a bad thing. It simply shows that we must use and not *abuse* the good things arranged for our enjoyment.

In our December number, Louis Ott, Esq., of Nelson, Co., will commence a series of articles (six in number) discussing the following subjects, viz: 1st. Virginia as a Grape Country; 2nd. Object of Raising Grapes. (table and wine); 3rd. Varieties of Grapes; 4th. Planting of and Attending to Vineyard; 5th. Cost and Yield of a Vineyard; 6th. Making Wine. We are sure that these articles will demonstrate the ability of our State as well as North Carolina, to embark in the business of wine-making on a large and profitable scale, which will demand the services of numbers of men fitted, as Mr. Ott is, by *skill and experience*, to make it a perfect success. What say Messrs. Stearns, Haxall, Palmer, Crenshaw, Carrington and other wealthy and enterprising gentlemen to the formation of a *large manufactory* of this kind. The *Chronicle* says:

"Some idea of the extent of grape culture in Albemarle Co. may be gathered from the facts in regard to the quantity of grapes shipped by express, and the quantity received at the wine cellar. During the months of September and October, 81,797 pounds were shipped by the Adams Express Company. Of these 75,778 pounds went to New York; 3,828 pounds to Baltimore; 1,323 pounds to the White Sulphur Springs; 550 pounds to Huntington, West Virginia, and 318 pounds to Charleston, West Virginia.

In addition to this, 84,872 pounds were received at the wine cellars of the *Monticello Wine Company*, making a total of 166,669 pounds of grapes marketed, over and above consumption. The crop was not so large as it was last year, but brought remunerative prices. The wet weather injured the Delaware variety to such an extent that it was almost a failure."

COL. W. C. KNIGHT.

We have the pleasure of presenting to our readers this month the likeness of the President of the Virginia State Agricultural Society.

Col. WILLIAM CARTER KNIGHT was born in Nottoway county, Va., June 28th, 1818. On his father's side he is of English extraction, his grandmother being a Walton, and nearly related to one of the signers of the Declaration of that name.

Col. Knight's mother was a Miss Carter, whose father had removed to Nottoway from the Northern neck about the close of the revolution.

Col. Knight received his academic education at Prince Edward C. H., under the tuition of Mr. David Comfort. He was sent to Randolph Macon College, in Mecklenburg county, in the Fall of 1832 and remained two sessions; then to Hampden Sydney College, where he graduated in 1835. From thence he went to the University of Virginia and studied Law and the Modern Languages.

He was licensed to practice law in 1839.

In 1840 he married, and in 1841 settled himself upon a farm and devoted himself to an improved system of culture. The vast improvement made in this farm may be judged by the fact that though valued at only \$5 per acre when he came in possession, he sold it, at the end of 17 years, for \$50 per acre for 400 acres under culture, and \$8 per acre for the remainder. He then purchased the estate known as *Wilton*, situated on the north side of the James river six miles below Richmond, where he resided until his removal to Richmond seven years ago. Though giving strict attention to the practice of his profession he found time to take an active interest in the improvement of his farm and in the general agricultural improvement of the State. In 1858 he was elected to the Senate of the State from the districts composed of the counties of Nottoway, Prince Edward and Lunenburg.

He took an active part in the formation of the State Agricultural Society, and

in 1855 was elected a member of the Executive Committee, and has continued an officer of the Society to the present time, and for two years past has been its President. He took a deep interest in the improvement of the Wilton estate. In 1862, the third year of his occupancy, he had 200 acres of very fine clover, which proved a Godsend to the army of General Lee when it was almost impossible to obtain forage elsewhere. He devoted all the resources of the farm to the support of the army during the entire struggle, and the Government was in debt to him more than half a million dollars at its close.

After the close of the war he removed to Richmond for the purpose of educating his children, and became engaged in the manufacture of agricultural implements in partnership with George Watt, the inventor of the celebrated Watt Plow. At the close of five years the partnership of Watt & Knight expired by limitation. He is now President of the Richmond Stove Company, one of the most active and enterprising manufacturing companies in the city.

In person, Col. Knight is an excellent specimen of the Virginia gentleman, and is noted for his high-toned principle, and manly bearing. Though modest and retiring he is looked up to by his acquaintances and friends, (of which he has a host,) as one of the most judicious and enterprising citizens of the State.

GEN. FITZ. LEE AND HIS MISSION NORTH.

The Potomac Immigration Society has taken the most sensible course we have yet seen taken by any of the emigrant societies, in sending delegates North, to lay before the people who have money to invest the advantages of coming to Virginia to invest it. Nothing will convince the Northern people so quickly that we are in earnest in our desire to have them come down to live among us as to go to them and tell them to their faces. There is nothing that so readily convinces men of each others intentions as personal intercourse.

We are perfectly satisfied that if the people of the North knew the exact state of affairs in Virginia there would soon be such an immigration to this State as would relieve us of all our surplus lands, and our debts too. Let some more such men as those who recently visited New York go to Philadelphia, or any other large commercial centre at the North, and tell what we are willing to let them do for us, and what we are willing to do for them, and we feel assured that much good will be accomplished.

POT FLOWERS IN SLEEPING ROOMS.

We copy the following on this interesting subject from that sterling paper, "*The New York Journal of Commerce* :

NEW YORK, October 6, 1875.

Editors of the Journal of Commerce :

Is it injurious to health to have plants growing in the same apartments where persons are sleeping?

Your reply will be considered sufficient authority to decide the matter with a number of readers of your valuable journal. W.

Reply.—It is injurious to health to have growing plants in sleeping apartments. The reason this is so little understood among people of intelligence is to be found in the fact that the action of plants upon the atmosphere having been tested by day and found to be favorable, it has not occurred to the same observers to test it again by night, when the conditions are naturally changed. Carbonic acid is

the product of perfect combustion of carbon, and is therefore produced by the breathing of animals. Upon inhalation the oxygen in part unites with carbon in the system, and the air expired contains $4\frac{1}{2}$ per cent. carbonic acid gas. This is quickly diffused through the atmosphere of an apartment, but a continual re-breathing of the same atmosphere without thorough ventilation must result in rendering it unhealthy. A single pair of lungs require for healthy action from 212 to 353 cubic inches of pure air per hour, containing about four pounds of oxygen. During the day growing plants counteract the effect of a man's breath upon the atmosphere, reversing the process. That is, the carbonic acid gas is inhaled by the plant through the leaves, which are the lungs, and being therein decomposed, the solid carbon is added to their structure and the pure oxygen is expired. This only takes place where there is light. The moment it becomes dark the plants give back some of the carbonic acid gas to the atmosphere. Thus, plants fill a sitting-room during the day with life and health, but at night contaminate the air of a sleeping apartment.

FLUES FOR CURING TOBACCO—AN INQUIRY.

The following letter was received by a friend of ours, and as the answer to the inquiry it contains will prove of general service, we request that such of our correspondents who have had the most experience in "flue curing," and their construction, will favor us with a full and circumstantial account of the matter:

CUMBERLAND Co., Va., Sept. 29, 1875.

"I take the liberty of troubling you with an inquiry in regard to stove flues for curing tobacco. Our present way of building an open fire on the floor of the house is very uncertain, laborious and dangerous. There is, besides, never any certainty as to what the color of the tobacco will be. I hear that those who use the flues think them dangerous, as they sometimes burst from excessive heat. Is this the case everywhere our sandstone or granite is used for their construction? I should be glad to know the shape and size of these flues; how the fireplaces are constructed, and whether a chimney is necessary. If it is, what should be its height? The houses in which I would put them would be 24 feet square.

"I raise only what is known as "shipping tobacco," in the curing of which it is only necessary to get a high degree of heat in the early stages of curing. This we cannot do with wood fires, as the blaze will coddle the leaf on the lower tiers. I have used charcoal with great success, but its preparation is laborious and costly.

"These inquiries cannot, of course, be of any service for the present season. I desire their answer for my guidance in the future. E. R. C.

The State Fair comes off before another issue of this journal, and hundreds of its readers will flock to Richmond. All who are in want of dry goods, fancy goods, cloths, carpets, oil cloths, &c., &c., should call and examine the immense stock of goods which are offered for sale by Messrs. Levy Brothers, 1017 and 1019 Main Street, Richmond. Never before has a larger stock of goods, or one more complete in every department, been offered by Messrs. Levy. Their stock is the largest south of New York, and gives employment to thirty or forty lady and gentlemen clerks, all of whom are polite and attentive. See their advertisement.

Mr. Jno. Sanders, of Smyth county, Va., has just sold 19 head of two year old cattle in Philadelphia, averaging $1,164\frac{1}{2}$ pounds. They were of the short horn Durham breed. The Richmond market does not require such large cattle as our Northern cities. This speaks well for our Southwest farmers.

We call special attention to the card of Wilkinson & Wither's Clothing Emporium, on second cover page. They keep a large and desirable stock of clothing and furnishing goods, of style, quality and finish to suit all classes and conditions. Whilst providing for the wants of the finest city trade, they pay special attention to supplying the wants of the farmers and mechanics. They are active, responsible business men, and rapidly becoming known as the leading house in their department in our State. They keep good goods at low prices, and we recommend them with pleasure.

We had the pleasure a few days since of meeting at the Exchange Hotel in this city, Gen. H. H. Hurt, the Conservative candidate for the Senate in Halifax county. The General's empty sleeve shows that he has seen service. We found him a very intelligent and agreeable gentleman, and have no doubt he will, if elected, make a useful and valuable member of the Senate.

The *Patriot and Herald*, published at Marion, Va., by Col. Wm. C. Pendleton, is one of the most readable and enterprising exchanges which we receive from Southwest Virginia. We recommend it to our Southwestern subscribers and to such of our advertisers who wish to reach the rich farmers of Smythe, Tyzewell, Wythe and Washington counties.

ST. JAMES HOTEL.—This is the best located, as well as one of the best hotels in every respect in this city. The price of board is cheaper than others of the same class. Col. John P. Ballard, the veteran hotel keeper of Virginia is associated with Maj. Hoenniger. See their advertisement.

We call the attention of our readers to the card of Taliaferro & Loving. Mr. F. A. Sanders, of Smyth county, has associated himself with this firm, and will, at all times, be ready to attend to the wants of his friends in Southwest Va. We can safely recommend him and this firm to our readers.

THE DISTRICTS FAIRS.—In our next issue, we hope to give full accounts of the Wytheville, Lynchburg, Staunton and Culpeper Fairs. This number of our Journal goes to press just as the above fairs close, in order that it may reach our readers before they start to our State Fair. The reports received state that all of the above fairs have been a success. *Now let all of them unite in making our grand old State Fair such a success as she deserves.*

THE NEW YORK WORLD says: "The speculation in cotton has taken a turn towards higher prices, and the decline which has been going on almost uninterruptedly since March last seems at length to have received a decided check. Prices have been forced down in the meantime more than four cents a pound, and this affords an assurance of safe values which it is impossible to ignore, fortified as it is by other circumstances of more or less significance. The Liverpool market has become quite active, with a partial advance in prices. That market requires more liberal shipments from the American ports, and bids higher prices to stimulate them. Besides it begins to be suspected that the crop for the current year has been overestimated in placing it at $4\frac{1}{2}$ to $4\frac{1}{2}$ million bales. The planting season was late, the acreage without important increase, the growing crops was assailed by drouths in some sections, floods in other, and latterly by storms, high winds, excessive rains, and unseasonable cold in various parts.

BOTTOM TOUCHED.

Dry Goods at Lower Prices than Ever.

Money saved by buying your Dry Goods from Levy Brothers,

Who have made large purchases since the recent decline.

Fancy Grenadines at $8\frac{1}{2}$, 10 and $12\frac{1}{2}$ c. per yard, worth $16\frac{2}{3}$, 20 and 25c.; Rich Styles Fancy Grenadines at $16\frac{2}{3}$, 20, 25, 30 and 35c., worth from 25 to 50c.;

Black Grenadines in all qualities from $12\frac{1}{2}$ c. up to \$2.25 per yard—this embraces not only the cheapest, but best assorted stock ever offered in this city;

Ecreu Linen Tussore Suiting at $8\frac{1}{2}$ c. per yard, worth $16\frac{2}{3}$ c.; at $12\frac{1}{2}$ c., would be a bargain at 25c.; at $16\frac{2}{3}$ c., worth 30c.—these goods must be seen to be appreciated; Silk-Warp Japanese Stripes and Plaids at 30c. per yard, worth 50c.;

Japanese Cloth at $12\frac{1}{2}$ c., worth 25c.; Wash-Poplin, best goods manufactured, at $12\frac{1}{2}$ c. and 15c., worth $16\frac{2}{3}$ and 25c.; Debeges, at 25, 30, 35, 40 and 50c. These goods can be had in all the new shades;

New style Plaid Dress Goods from 25 to 50c. per yard—a reduction of from twenty-five to fifty per cent. has been made in these goods; Fast-Colored Lawns at $8\frac{1}{2}$, 10, $16\frac{2}{3}$, 20, 25, 30, $37\frac{1}{2}$ and 50c.;

Also, at the lowest prices, Pongees, Mohairs, Japanese Silks, Jaconets, Cambrics, Linen Lawns, and all other styles of fashionable dress goods; Black Alpaca at 25, 30, 35, 40, 45, 50, 60, 75, 85, 90c., \$1 and \$1.25;

Australian Crepe at 50, 60 and 75c., worth 65c., 75c. and \$1; Yard-wide Printed Percales and Cambrics at $12\frac{1}{2}$ and $16\frac{2}{3}$ c. per yard—regular prices, $16\frac{2}{3}$ and 5c.;

Victoria Lawns at $16\frac{2}{3}$, 20, 25 and 30c.; also, Piques at $16\frac{2}{3}$, 20, 25, 30, 35 and 40c.—all remarkably cheap; Swiss Muslins from $12\frac{1}{2}$ c. up to 50c. per yard—all very cheap;

Checked and Striped Nainsook Muslins, Checked and Striped Swiss Muslins; Corded, Striped and Figured Piques—all at extraordinary bargains;

Lonsdale Cambric, first quality, one yard wide, at $16\frac{2}{3}$ per yard; Knight's Cambric, 33 inches wide, at 10c., would be a bargain at $12\frac{1}{2}$ c.;

Utica Sheeting, 10-4 wide, in remnants from two and a half up to ten yards, at 40c. per yard; 50c. is the regular price everywhere; Remnants of Dress Goods of every description to be sold at less than half value;

Black and Colored Silks at lower prices and in greater variety than at any other establishment in this State; Embroidered Curtain-Muslin, one yard wide, at 25c., worth $37\frac{1}{2}$ c.;

Hamburgh Net for Curtains, at 20, 25, 30, 35, 40, 50c., and up to \$1 per yard;

Hamburgh Lace Curtains from \$4 to \$20 per set for two windows; Hamburgh Lace Lambrequins, from \$2 50 up to \$5 a pair—all very cheap and desirable;

Window-Shades in great variety, among which will be found an exact imitation of lace shades, now so fashionable: A large assortment of Curtain Fixtures, such as Cornices, Bands, Loops and Hooks;

Black, White and Ecreu Hamburgh Nets, at a reduction of 50c.; A full assortment of Laces suitable for trimming; A large assortment of Silk Neck Scarfs and Ties; Also, Black Lace Scarfs and White Lace and Muslin Scarfs;

Ready-Made Dresses for ladies in all of the latest styles, from \$3 to \$25; A full assortment of Under-Garments at extraordinary low prices;; A large assortment of Ducks and Drillings for boys' and men's wear;

Sash Ribbons at 25c., 30c., 35c., 40c. and 50c., and up to \$1.25 per yard—all extraordinarily cheap; A full assortment of Ribbons from a half-inch up to seven inches at the lowest prices; Gauze Shirts for men and women—some as low as 40c. for men;

Bustles in all the new styles; also, Hoop Skirts and Balmorals; Matting, Oil-Cloths, Rugs, Carpets, Mats and Hassocks; Rubber, Jet and Gold Plated Jewelry in great variety; Summer Shawls, Lace Points and Jackets;

Black Grenadine Shawls at \$3, worth \$4; Laces and Embroideries in endless variety at low prices; Goodrich & Barnum's Tuckers at 75c.; Machine Needles at 4 and 5c.; Machine Oil in large bottles at 15c.;

Clark's and Coat's Spool Cotton at 70c. per dozen;

And thousands of other articles not enumerated in this advertisement.

Prompt attention to orders.

july—tf

LEVY BROTHERS, *Richmond, Va.*



THE VIRGINIA WINE

AND

CIDER MILL

Is superior to any MILL now made, and more sold annually in this market than of all other kinds combined. It does not grate, but thoroughly crushes every fruit cell, insuring all cider the apples will yield.

Send for Catalogue.

iv-1y

CHAS. T. PALMER,
1526 Main Street, Richmond, Va.

G. F. WATSON'S FURNITURE WORKS, RICHMOND.

Having timber tracts in this State sufficient to last several years, with a complete lumbering rafting, and saw-mill, organization of fifty men, together with one of the most complete factories in the country located in this city, can furnish Poplar and hard wood, no soft pine, low-priced FURNITURE as cheap as any factory North or West—and fine Walnut FURNITURE cheaper. A stock of one million feet of lumber insures seasoned work, warranted in this and every respect. Manufacture MATTRESSES of all kinds.

Lumber-mill, Indiantown, Va.; Factory, Backens street; lumber-yards, Ash and Poplar streets; warehouses, No. 18 Governor Thimessuth streets, Richmond.

apl

FARMERS AND DEALERS Pure Fine Ground Bone

PURE BONE FLOUR. PURE DISSOLVED BONE ASH. PURE DISSOLVED RAW BONE

66° OIL VITRIOL. GERMAN POTASH SALTS. Pure Chemicals for making Superphosphates at the lowest market price. Call at

R. J. BAKER & CO'S.

BALTIMORE, MD.

SOLUBLE PACIFIC GUANO,

FOR TOBACCO, CORN AND OTHER CROPS.

After ten years' continuous use, throughout Virginia and the South, Soluble Pacific Guano has acquired a reputation for reliability equal to that formerly enjoyed by the Peruvian Guano, and the quantity used annually exceeds that of any other fertilizer.

It has been the aim of all connected with this Guano to produce the best possible fertilizer at the lowest possible cost, and we claim that the unusual resources and facilities of the manufacturers have enabled them to approach this more nearly than has been done in any other fertilizer with which we are acquainted. Those who have been using it unite with us in the opinion, that by its use the consumer gets

THE GREATEST BENEFIT FROM THE SMALLEST OUTLAY.

We offer it with great confidence for use on the Tobacco and other crops to be grown in 1875, with the assurance that it is, in all respects, equal to what it has been in the past.

PURE PERUVIAN GUANO, AS IMPORTED.

We have a full supply of **No. 1 Guanape Peruvian Guano**, from the Government Agent in New York, selected from one of the finest cargoes ever imported. It is dry and in beautiful order, and contains within a fraction of **13 per cent. of Ammonia**, which is within two per cent. of what the old Chincha Peruvian used to contain—in fact, it would be difficult to tell one from the other.

We offer these standard and thoroughly tested fertilizers for Tobacco, Corn, and all Spring Crops, and are prepared to sell them at such prices as will make it to the interest of consumers and dealers to purchase their supplies of us instead of sending their orders to New York, or elsewhere.

For further information and supplies, address,

ALLISON & ADDISON,

mar—tf

Seed and Guano Merchants, Richmond, Va

ST. JAMES HOTEL,

RICHMOND, VA.

Pleasantly located on Twelfth Street, facing Bank Street and the Capitol Square. In the centre of the business portion of the city, within one square of the Post Office and Custom House, it is, by its retired location opposite the southeast corner of the beautiful park surrounding the Capitol of Virginia, the most quiet hotel in Richmond.

The proprietor having had a life long experience in hotel business—first at the Everett House, New York, and afterwards as proprietor of the Spotswood Hotel, Richmond, in its best days—and now assisted by Mr. JOHN P. BALLARD, the popular veteran hotel-keeper of Virginia, assures visitors of the ST. JAMES that no effort on his part will be spared to make them comfortable and to keep the house in first-class style. Coaches will attend the arrival of all trains. Elegant carriages are at all times at the service of the traveling public.

June

T. W. HOENNIGER, Proprietor.

FALL STYLES, 1874.

CHARLOTTESVILLE WOOLEN MILLS SAMPLE CARDS

Are now ready for mailing. Our assortment embraces

TWENTY-FOUR PATTERNS.

Merchants desiring samples, will please address,

CHARLOTTESVILLE WOOLEN MILLS,
CHARLOTTESVILLE, VA.

G. W. ROYSTER & CO., Commission Merchants, RICHMOND, VIRGINIA.

Solicit Consignments of Tobacco, Grain, Flour and Produce Generally
Refer by Special Permission to J. W. LOCKWOOD, Cashier National Bank of
Va., Richmond; ISAAC DAVENPORT, JR., Pres. First National Bank, Richmond.
Grain Bags furnished on application. aug-ly

WAGONS! WAGONS!

The subscriber has on hand

WAGONS AND CARTS

of various descriptions, that he wishes to dispose of on very moderate terms, and is still manufacturing others, and solicits a call from all in want of any article in his line, and he guarantees good workmanship, and first-rate material.

A. B. LIPSCOMB,

my 116 Cary Street, between Adams and Jefferson.

CHESAPEAKE AND OHIO R. R.

On and after SUNDAY, June 13th, 1875, passenger trains will run as follows:

FROM RICHMOND:

Leave Richmond,	9.30 A. M.	9.10 P. M.
Arrive at Gordonsville,	12.45 P. M.	12.30 A. M.
Arrive at Washington,	7.33 P. M.	6.33 A. M.
Arrive at Charlottesville,	1.45 P. M.	1.24 A. M.
Arrive at Lynchburg,	4.50 P. M.	4.50 A. M.
Arrive at Staunton,	4.10 P. M.	3.30 A. M.
Arrive at Goshen,	5.56 P. M.	5.14 A. M.
Arrive at Millboro',	6.17 P. M.	5.36 A. M.
Arrive at Covington,	7.51 P. M.	7.06 A. M.
Arrive at Alleghany,	8.59 P. M.	8.14 A. M.
Arrive at White Sulphur,	9.15 P. M.	8.32 A. M.
Arrive at Hinton,	12.15 A. M.	10.35 A. M.
Arrive at Kanawha Falls,	4.20 A. M.	1.25 P. M.
Arrive at Charleston,	6.15 A. M.	3.25 P. M.
Arrive at Huntington,	8.30 A. M.	5.45 P. M.
Arrive at Cincinnati,	6.00 A. M.	

Train leaving Richmond at 9.30 A. M. runs daily, (Sunday excepted) stopping at all regular stations.

Train leaving Richmond 9.10 P. M. runs daily stopping at all regular stations west of Alleghany.

Accommodation train leaves Richmond for Gordonsville and all intermediate stations daily (Sunday excepted) at 4.30 P. M.

Pullman Sleeping Car runs on 9.10 P. M. train between Richmond and White Sulphur.

For further information, rates, &c., apply at 826 Main Street, or at Company's offices.

CONWAY R. HOWARD,

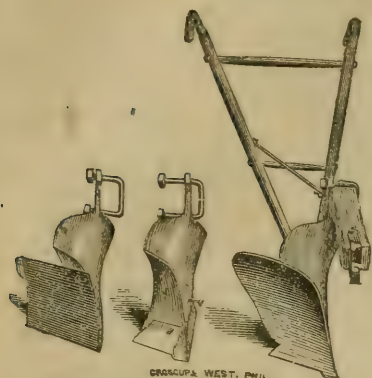
General Passenger and Ticket Agent.

W. M. S. DUNN, Engineer and Sup't Transportation.

ly

THE WATT PLOW

VICTORIOUS ON EVERY FIELD!



A combined TURNING PLOW, CULTIVATOR, SUBSOILER, ROW-OPENER, PEANUT-DIGGER, TOBACCO and COTTON SCRAPER and SWEEP.

No CHOKING when bright and smooth; no LABOR to the plowman; ONE-THIRD LESS DRAUGHT to the team; thorough BURIAL of Weeds, Grass, &c.; great STRENGTH, Durability and Economy in its use, and complete pulverization of the soil.

FARMERS WHO USE IT WILL USE NO OTHER.

Awarded all the Premiums at every Fair attended in 1873.

Awarded First Premiums at every Fair attended in 1874.

Virginia State Fair, Richmond—FIRST PREMIUMS ON THREE AND FOUR-HORSE PLOWS.

Right and Left Hand—ALL PREMIUMS AWARDED THEIR SIZES.

Also at the Plowing Match ALL PREMIUMS AWARDED WHITE PLOWMEN were taken with WATT PLOWS of ONE, TWO, THREE and FOUR-HORSE SIZES; and COLORED PLOWMAN by ONE, TWO and THREE-HORSE SIZES; being

SEVEN PREMIUMS OUT OF EIGHT.

The superior work done by the WATT, and the complete ease with which it is handled, was apparent to all.

NORTH CAROLINA STATE FAIR, Raleigh, October 10th;

GEORGIA STATE FAIR, Atlanta, October 19th;

SOUTH CAROLINA STATE FAIR, Columbia, November 10th;

STAUNTON, VA., October 13th;

LYNCHBURG, October 20th;

WELDON, N. C., October 20th;

ORANGEBURG, S. C., November 3rd;

CHARLOTTE, N. C., November 3rd;

DANVILLE, VA., November 3rd;

POINT PLEASANT, W. VA., October.

Thus, with its great reputation before, it has gained new laurels this year, which must convince every farmer of its vast superiority over other plows.

We warrant every plow sold to be as represented or to be returned to us. We solicit a trial. Catalogues sent to any address.

WATT & CALL,

SOLE MANUFACTURERS,

1452 Franklin St., Richmond, Va.

Special Agents for "The Best" Spring-Tooth Horse-Rake and Gleaner: also for sale of our own manufacture, HARROWS, CULTIVATORS, and all kinds of IMPLEMENTS at lowest prices—all warranted.

BURDETT ORGAN.

I have a NEW BURDETT ORGAN which I will sell for \$150—Manufacturer's price \$175—Boxed and delivered at any Depot or Wharf in Baltimore. Terms of payment accommodating.

L. R. DICKINSON.

Also, THREE FIRST-CLASS SEWING MACHINES which will be sold at a discount of *forty per cent.* on Manufacturers' prices.

TREES! TREES!

The Largest and most Complete Stock of fruit and ornamental Trees in the U. S.

Descriptive and Illustrated Priced Catalogues sent as follows: No. 1—Fruits, 10c. No. 2—Ornamental Trees, new ed., with colored plate, 25c. No. 3—Greenhouse plants, 10c. No. 4—Wholesale—Free.

ELLWANGER & BARRY,

sep Mount Hope Nurseries, ROCHESTER, N.Y.

NURSERY STOCK. FALL, 1875.

We desire to call the attention of Nurserymen and Dealers to our exceedingly large, thrifty, and great variety of stock for Fall trade.

Special inducements offered in Standard, Dwarf and Crab Apples; Standard and Dwarf Pears, Cherries, Gooseberries, Currants, Elms, Maples, Evergreens, Shrubs and Roses.

Correspondence Solicited.

SMITH & POWELL,
Syracuse Nurseries, Syracuse, N. Y.



BLATCHLEY'S

Improved Cucumber Wood Pump is the acknowledged Standard of the market, by popular verdict, the best pump for the least

money. Attention is invited to Blatchley's Improved Bracket, the Drop Check Valve, which can be withdrawn without disturbing the joints, and the copper chamber which never cracks, scales or rusts and will last a life time. For Sale by Dealers and the trade generally. In order to be sure that you get Blatchley's Pump, be careful and see that it has my trade mark as above. If you do not know where to buy, descriptive circular, together with the name and address of the agent nearest you, will be promptly furnished by addressing with stamp,

CHAS. G. BLATCHLEY, Manufacturer,
mar-9m 506 Commerce St., Philadelphia, Pa.

Thoroughbred Stock for Sale.

I am breeding Thoroughbred Devon Cattle, Poland China, and Essex Hogs, South Down Sheep, &c. Also Light Brahma Fowls, and have for sale several pairs of White and Black Guineas. Persons ordering from me can rely on getting as good stock as any in this country. My herd of Devons are of the most improved strains. They took 7 first premiums at our last Virginia State Fair. For further particulars,

F. W. CHILES,

feb-6m Louisa C. H., Va.

FRESH
GARDEN and FIELD SEED
At the old stand of Palmer & Turpin,
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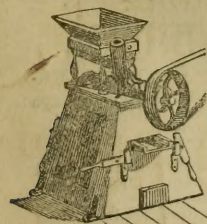
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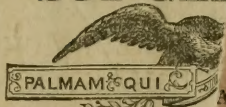
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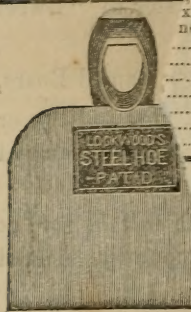
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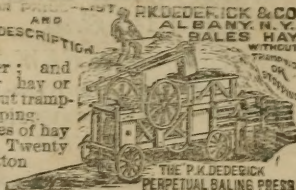
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